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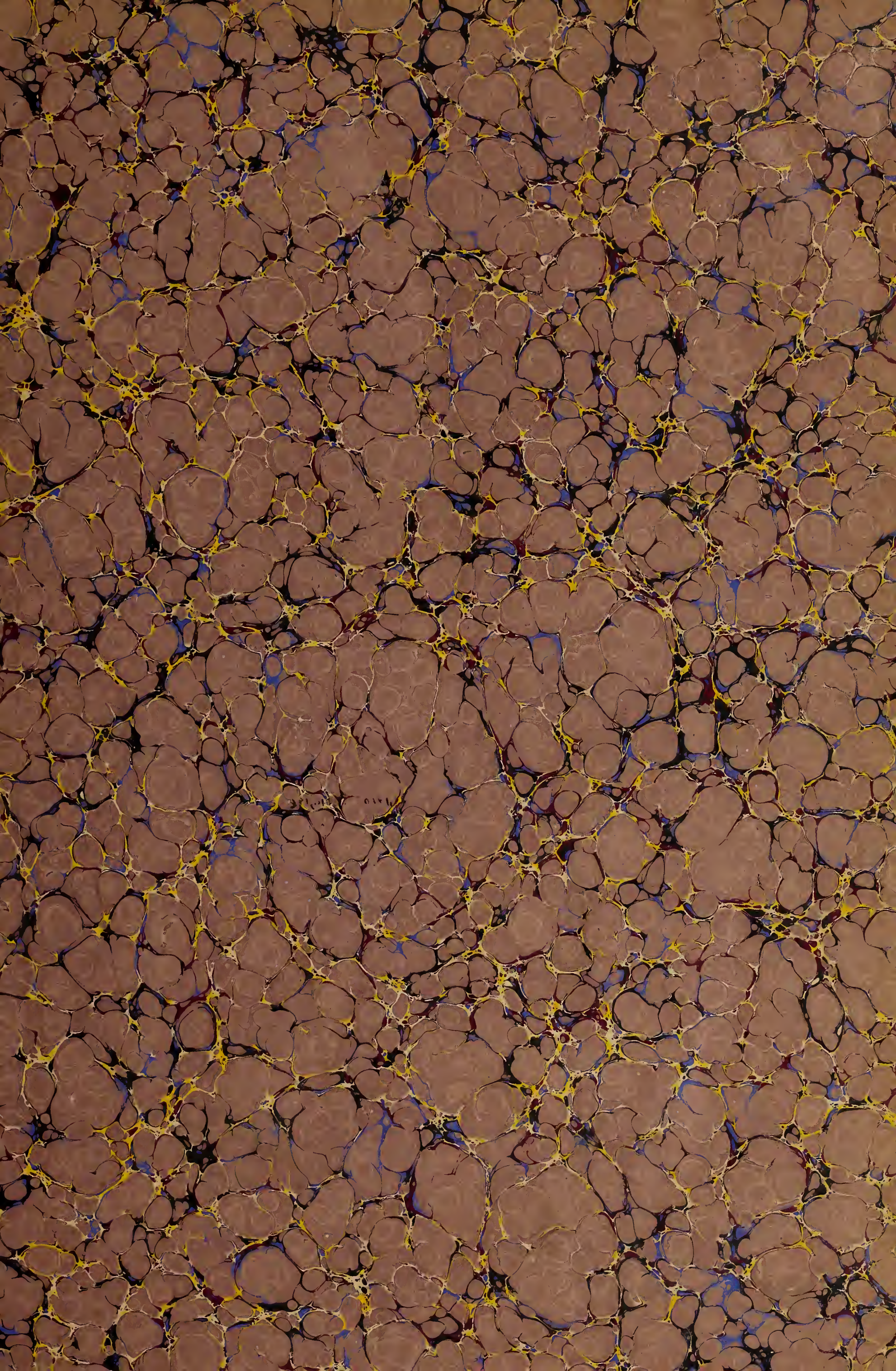
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FARM *and* FIRESIDE

The National Farm Paper - Every Other Week

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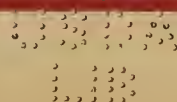
Saturday, October 9, 1915

5 cents a copy



PHOTO BY CLARENCE A. PURCHASE

Another Sign of Fall



"I Must Marry a Millionaire"

Chloe Malone, heroine of the new serial by FANNIE HEASLIP LEA, so decides, and adventures come thick and fast, for Chloe is a New Orleans girl, beautiful, clever, warm-hearted, altogether fascinating, but poor as a church-mouse. She is as lovable as the same author's "Sicily Ann." The new serial begins in the November *Woman's Home Companion*.

Robin Hood and His Barn

The story of a campaign, a candidate, Robin Hood himself, and a little old two-cylinder car, by GRACE S. RICHMOND.

The Smoke-Swish

A Brinkertown story about a benevolent domestic jar by SOPHIE KERR.

In Different Worlds

A tale of Jimmie Nesbit, the Millionaire Kid, and his adventurous wooing of a star of the movies, by MARY HASTINGS BRADLEY.

Snow White and the Seven Dwarfs

A reproduction in full colors of a wonderful painting by JESSIE WILLCOX SMITH that you will be eager to frame.

Marketing by Mail

POSTMASTER-GENERAL BURLESON has written for the November *Woman's Home Companion* an article as valuable as it is entertaining showing how the parcel post can benefit the housewife and telling her just what to do in order to reap the fullest advantage from it.

Solving Your Christmas Problem

Now is the time to begin by turning to the *Companion* for suggestions. The wise women of America have come to depend upon the *Companion* suggestions because of their beauty, their originality, their little cost and the plain, simple directions that anyone can follow; suggestions for the skillfullest needlewoman and those who do not like to sew. The November *Companion* has a Christmas Gift Section, of twelve pages, four of them in color.

Fall and Winter Fashions

GRACE MARGARET GOULD adapts the latest designs of Paris and New York for the really well-dressed woman. She tells you how to dress beautifully at little cost, and there are lots of practical things for children.

Joyous News for the Little Folk

Jack and Betty return in the November number and they have a magazine of their own with those enchanting cut-outs.

In the November

WOMAN'S HOME COMPANION

The regular subscription price of the WOMAN'S HOME COMPANION is \$1.50 a year. You can have both the COMPANION and FARM AND FIRESIDE for a whole year for \$1.60. Send your subscription now to The Crowell Publishing Company, Springfield, Ohio.

The great serial of the year, "THE RISING TIDE," the new novel by MARGARET DELAND, the foremost novelist in America, begins in the December WOMAN'S HOME COMPANION.

FARM and FIRESIDE

—PUBLISHED BY—

THE CROWELL PUBLISHING COMPANY, SPRINGFIELD, OHIO

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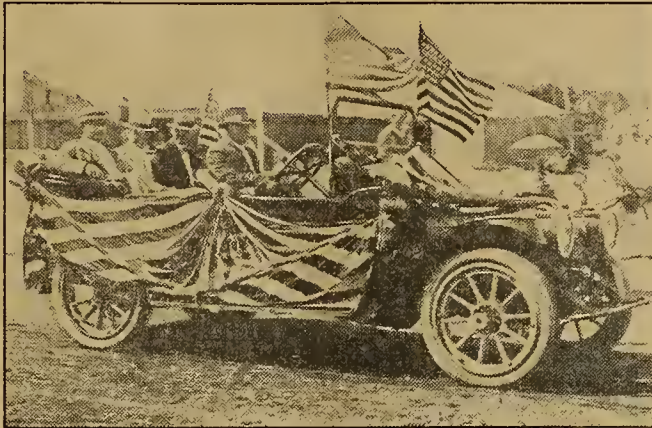
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SATURDAY, OCTOBER 9, 1915

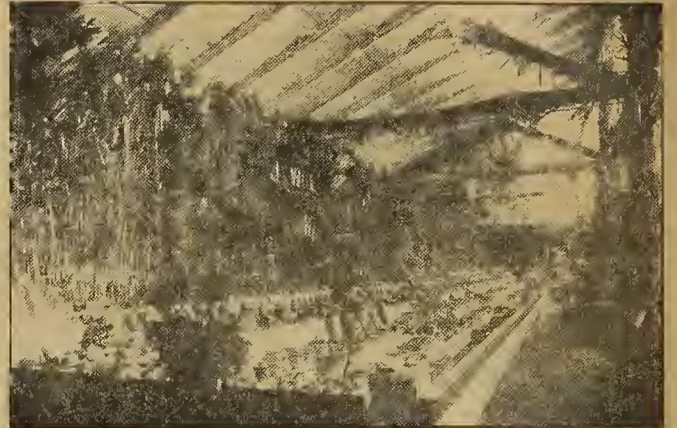
Published Bi-Weekly



The interesting and pleasing things about the live-stock exhibits were the number of entries and the quality of the animals. Tents housed the overflow



Samuel E. Lux, president and manager of the fair, Arthur Capper, Governor of Kansas, and Jay E. House, Mayor of Topeka, opened the fair with addresses



Many granges and farmers' unions had displays of products of garden, field, and orchard. This section of Agricultural Hall shows the Jewell County exhibit

THOUSANDS of persons, hundreds of automobiles and street cars, and many carriages crowded through the gates in a steady stream. Persons were not waiting their turn to buy tickets. Motor cars and buggies were not backed up two or three blocks down the street. Ticket sellers and collectors were not yelling directions to the crowd. Discussions whether Willie and Johnny were old enough to pay admission instead of going in free were not heard.

Inside the 86 acres of grounds people roamed around, and passed through the 24 buildings and scores of tents looking at the live stock, the grain, the fruit, the fancy-work, and the manufactured products of a great State. Everywhere there was the same disregard of admission fees, although the premiums paid on these exhibits of farm, home, and factory amounted to \$28,000.

There were five days of pacing, trotting, and running races, including the State Derby; daring motor-car races; monoplane flights; polo games between a United States Army team and a team from a near-by city; and a horse show with horses from many celebrated stables of the United States. The only charge was for the races and the horse show.

The 1915 Fair Holds First Place

IN SPITE of the carelessness about admission fees the fair was the biggest, the best, and the most successful of any fairs held at the state capital. Former years had brought large crowds and much money when a substantial fee had been charged at the gate and a smaller retainer had been collected every time a person turned around. Yet the 1915 fair held first place from either point of attendance or from the treasurer's statement after all of the premiums and the bills had been paid.

Thus the first free fair ever held at a state capital, the fair held at Topeka by the Kansas State Fair Association, September 13th to 18th, passed into history.

The free-fair idea has been discussed in Topeka for the last year or two. Samuel E. Lux, president and manager of the free fair, was one of the first advocates of a free fair, and did more, perhaps, to bring the free fair about than any other person.

"The Kansas Free Fair has been such a big success," Mr. Lux said, "that it will be less than ten years before every one of the great fairs will be free. Fairs are educational in their nature, and that is the reason I came to the conclusion that they should be placed on the same basis as our free schools, supported by all of the people and made free to all of the people."

"Had we had good weather Tuesday, Topeka Day, I am satisfied," he continued, "there would have been at least 75,000 persons on the grounds during the day and evening. Friday was not so favorable as it might have been, and still 50,000 people, the greatest crowd in our history, were there. Rain forced us to postpone events time after time, but still the crowd came."

"From the exhibitors' standpoint there has been displayed the pick of the country," concluded Mr. Lux, "not only in live-stock departments but in all classes. Our live stock was the class of live stock that is exhibited at national shows. Many of the herds will be taken to the live-stock show at the exposition at San Francisco. Of course we have had many knotty little problems that confronted us and gave us trouble. But before next year they will be worked out. Will there be a free fair next year? There will."

E

Kansas Gives Free Fair

First New-Plan State Show Proves a Great Success

By HARRY M. ZIEGLER

This is how Kansas gave a free fair: A law was passed by the 1915 legislature which provided that the voters of counties having 50,000 or more inhabitants, and desiring to hold a free fair, could levy a one-quarter mill tax on the assessed valuation of the county to pay all of the fair premiums except those of the speed ring. The law also provided that 1,000 legal voters had to request such an election, and that if such a request was made the county commissioners would have to submit the proposition at a special or a regular election within sixty days.

The legislature appropriated \$5,000 to aid a free fair if Shawnee County voted to hold one. And Shawnee County, of which Topeka is the county seat as well as the capital of Kansas, voted to hold a free fair.

The quarter of a mill fund raised \$23,000, and with the \$5,000 appropriated by the legislature to aid Shawnee County the amount available for premiums was \$28,000.

In former years the races of the Topeka Fair have been self-sustaining; the receipts from the grand stand and the score-card privileges have been ample to pay for the races. This year was no exception.

In the cattle, horse, swine, and poultry departments the stall rentals and exhibitors' permits paid the salaries and expenses of the judges and superintendents and the care of the departments.

The other expenses of the free fair were taken care of through the money received from the concessions. A total of \$45,000 was paid out in prizes and stakes.

While rain cut down the attendance, more than 175,000 persons attended the fair. Folk from all over Kansas began arriving at the fair when the gates were opened the first day. They came in their own motor cars and stayed until the fair closed. Many of them camped out and had a real vacation. Special trains were run on all the railroads. Farmers from near-by points drove to Topeka every morning in their cars and returned home at night. This plan proved popular.

The crowds of visitors were well taken care of by the officials. The roadways for vehicles were separated

from the pathways for those who walked. Danger of accidents was avoided. Cinders were used all over the grounds. Even though it rained, the water drained off rapidly.

Decorated with United States flags and with the colors of the free fair, more than 100 motor cars paraded

up and down Kansas Avenue, the principal business street of Topeka, the morning of the first day of the fair. The parade prepared the way for the official opening of the fair at eleven o'clock by Arthur Capper, Governor of Kansas.

The leading car was occupied by the fair managers. It was followed by a car carrying Governor Capper and Jay E. House, Mayor of Topeka.

When the big gates were unlocked by Governor Capper and he had thrown the key far over the heads of the crowd, the free fair was opened. The gates were removed from their hinges and were not replaced until the fair was closed.

"People of Kansas have never assembled under more favorable social and financial conditions," said Governor Capper in his address. "While lands are being laid waste across the waters, Kansas is building bigger schoolhouses, bigger cities, and bigger institutions of all kinds."

"The first free fair of the nation is a fitting monument to the State's prosperity," he continued, "and on these grounds are exhibited the best that the West can produce."

Following the governor's address, the address of welcome on behalf of the city was made by Mayor House.

The Exhibits Make 300 Carloads

MORE than 300 carloads of exhibits, valued at more than two million dollars, were shown from 25 States. There were more than 300 head of horses in the show and exhibit classes. Nearly 1,000 head of cattle, 700 head of hogs, and 2,000 chickens were shown. Although Kansas is not a sheep State, more than 250 head of sheep were exhibited. The quality of the animals and the birds was one of the especially interesting and pleasing things about the live-stock section.

The cattle exhibit startled even the managers of the fair. The 550 stalls in the barn were filled even before the fair started. Large tents in various parts of the grounds housed the overflow. Four hundred and eighteen head of beef cattle and 220 head of dairy cattle were exhibited. It was the biggest cattle show ever held in Kansas.

The hog department grew clear outside of its pens. Additional room had to be provided. The sheep exhibit attracted much attention.

One poultry exhibitor had 250 birds on display. In the lot were 50 imported birds, some of which were prize-winners at the famous Crystal Palace Show held in London, England.

The only superintendent who was not worried about space for exhibits was the superintendent of the bee department. There was a mighty sweet exhibit in the honey department. The bees had plenty of room with 86 acres in which to fly around.

Quality was the most talked-of thing in all of the farm departments. Almost every visitor was surprised at the remarkable showing which was made.

Agricultural Hall was an enclosed forest of farm products. The display of fruit was excellent.

"I never saw such a corn display at any fair," said William M. James of Dorchester, Nebraska, member of the Nebraska State Board of Agriculture, who judged the agricultural exhibits.

The county [CONTINUED ON PAGE 15]



In spite of the carelessness about admission fees, the Kansas Free Fair was the biggest, the best, and the most successful of any of the fairs held at Topeka

The Editor's Letter

At Coolfont Farm, October 1, 1915

ONE of our readers begins a letter with this statement: "I know from experience that FARM AND FIRESIDE stands for the farmer, trying at all times to defend the man behind the plow."

I hope that's so; but nobody can defend anyone successfully. What this paper is trying to do is to have a discussion every other week with a few million farm people to the end that all of us may be able to defend ourselves. That's why I am printing so much of this man's letter.

"Will you allow me," says he, "to tell your readers about this country?"

Not quite in the way he wants to tell it. What he wants to do is to jump onto a certain locality, and the real-estate boomers and sharks which according to his story—which I do not in the least doubt—infest it. I'm not going to allow him to name that place for various reasons. First, because I have not investigated the matter, and I might be sorry. Second, because I prefer to leave the place nameless so it will apply to more infested localities. Whether or not the story is true of the place from which it comes I have not informed myself, but it is true of so many places that I shall leave it general. I print it as a warning to all homeseekers.

"We have one of the most fertile and best all-around countries," he says, "in the world, but we face conditions which it will take years to overcome. This is an irrigated country in which irrigation is a failure five years out of six. The country has too much rain for irrigation and not quite enough for dry farming."

Irrigation Teaches Many Lessons

PROBABLY the trouble lies in the management. One can scarcely conceive of a climate which does not need irrigation and is still too dry to get along without it. One place of which I know had a similar experience. An extensive system of irrigation works was installed, but when it came to be used a large portion of the irrigated lands on the lower slopes turned to swamps. Irrigated land often needs drainage. We have a great deal to learn about irrigation, especially new communities of inexperienced people. The country in question may be all right as soon as it is properly engineered. Just now the engineering seems all devoted to putting settlers on the skirts of the real-estate boom.

"The land agent," says our friend, "brings people here in carload lots, and herds them like cattle. Unloads them out of town, and never lets them talk with anyone here for fear that they will learn the truth about the country. If they let the homeseekers talk with the people here they would never sell another acre of land in this valley."

Did the reader ever go on one of those "personally conducted" homeseekers' excursions? If he has he may know that there is every chance in the world that our friend has not overcolored the picture. I have seen real-estate agents who were ready to come to blows with "curbstoners" who did not have the ability to get up carloads of land buyers but who made it their nefarious custom to take away the prospective buyers from under the very noses of the men operating the excursion by getting into conversation with the "seekers" at eating places or junction points along the way. This was considered a very low and depraved thing to do. After the regular "operator" had worked up this carload of customers, to have a fellow take the game right from his trap was perfectly maddening. The man dealing in homeseekers in carlots felt very much as a bald eagle would feel if a fish hawk, reversing the natural order of things, should snatch a fish from his very talons.

"They charge from \$150 to \$200 per acre," says our correspondent, "for land in the brush, when almost any settler here would gladly sell improved land for from \$75 to \$150 per acre."

Well, for land that is too wet for irrigation and too dry for dry farming, even the settlers' prices seem quite enough. It's just possible that our correspondent has a grudge at someone or something, but his description of the tactics of many managers of homeseeking excursions is true to life, and well worth the attention of anyone taking part in one of these expeditions.

"This year we went under a new law that confiscates everything—water tax payable in April, July, and December, the pumps at the river standing idle because the people can't pay and the irrigation district can't get money to buy fuel oil and pay running expenses. So we have had no water to speak of and our crops are lost almost entirely. I am not able to see how the people are to live and meet the heavy taxes this fall. All property, real and personal, is liable under the lien of these taxes; so you see the irrigation district will continue to exact its pound of flesh until all the people are ruined."

"This country is certainly a leveler. People of great and small means suffer alike. All close out and leave when they get a chance. I know a doctor who came here and invested something like \$50,000 and in about four years had to borrow money to get out of the country. I could go on and on telling the truth about this country, but this is enough."

Quite enough. This correspondent may be looking on the darkest side of the matter, but the situation is serious, no doubt. The worst of it is that it is not the picture of one place alone in which money-making "colonizing" companies are operating, but applies to

many of them, in irrigated regions and others. I quote this letter without telling the exact spot because I want my readers to apply it to other spots to which they have any thought of removing.

Here are all the conditions that go to make for failure, misery, and loss. First there is a private irrigation company which bought up a huge tract of land at desert prices, with the intention of making the desert blossom as the rose and their bank account flourish like the green bay tree of Scripture. It would have been just the same if the same men had organized a drainage company, or a company to exploit a dry-farming region or a tract of cut-over land, north or south. Farmers who need more land, tenants who wish to make homes of their own, city people bitten by the back-to-the-land bug, are herded together in carlots, and talked to by the most skillful salesmen in the world. They are tactfully kept from talking with the people already making a living on the land; and if they are brought in contact with any of them, they are assured that the people already in the country are for some reason selfishly interested in keeping new settlers out, and will knock the country. Men are taken along in the company who are supposed to be land seekers but really are hired to work on the "prospects" and who get commissions for any sales they make to their fellow settlers. The whole journey is a theatrical performance, everything is carefully staged, not to give the homeseekers a true view of the country, but to get them to sign the papers and make their first payments. That many of them do sign is shown by the fortunes made by these companies.

The settlers go on their farms without any true knowledge of the conditions, and therefore are soon in difficulties no matter how good the country may be. They do not understand the land or the climate, and if they depend on irrigation, they try to practice a difficult art of which they know nothing. Sometimes the country turns out to be good, if properly handled. But the men who sold the land to them knew nothing but the art of making money; there is nobody to teach them, they are all tenderfeet and cannot help each other. Out of such a web of errors and follies nothing can come but reverses. They lose out, as our correspondent says—but not all of them. Some master the situation, and make good. All might make good if they had the proper knowledge beforehand.

Herbert Quick

Growing Mushrooms

Ohio Man Runs a Subterranean Farm

By G. L. CANTERBURY

COAL, the chemists tell, has many by-products, but it took William Krumlaugh, an Ohio farmer, to add mushrooms to the list.

Krumlaugh, who lives on a small tract of land near Canton, in the northeastern part of the Buckeye State, like many farmers in that part of Ohio and in certain districts of Pennsylvania, Illinois, Iowa, and other States, opened a small coal mine in his land and takes out enough coal for his own use and for a limited

market in a near-by village. Two years ago he began growing mushrooms in beds located in the worked-out rooms and entries of his mine. The coal-mining and mushroom-raising go on side by side, the "by-product" netting more than the coal during the winter months when the demand for mushrooms is greatest.

Krumlaugh got the idea for raising mushrooms in his mine when on a visit to Seattle, Washington. There he saw mushrooms grown in specially built caves. It occurred to him that his mine built for the production of coal had all the natural qualities of the Washington caves. He came back to Ohio, told his son, Harry, and the two began at once the work of putting the idea into operation.

For a beginning the Krumlaughs used 150 square feet of a worked-out entry to give the idea a test. They prepared their compost from the manure in the stable where their farm horses and the horses used to draw the coal wagons were kept. They prepared the compost in the usual way, by mixing the fresh manure with straw, wetting it down, and letting it stand four or five weeks. Spawn was then broken up in small pieces and mixed with it. It was piled into the coal cars and taken four hundred yards into the mine to the worked-out entry, where they made their first bed. They covered this compost with a 1½-inch layer of leaf mold obtained from a near-by woods.

Within ten weeks the mushrooms raised themselves above the loam, their delicately fragile pink- and whiteness blooming weirdly in the darkness, forming what is believed to be the only strictly subterranean garden in existence. The mushrooms were picked when they were three inches high, and every two or three days a new crop was ready for picking. These they packed in boxes and sold to the restaurants and hotels in the near-by city.

It was a money-making proposition, so the Krumlaughs have added new beds till they now have 1,000 square feet laid out for mushrooms. The air in the mine is always moist, there is no light and, the beds being 100 feet straight down from the surface of the earth, the even temperature of 55 to 57 degrees is easily kept, so it is an ideal place for mushroom-growing. In extremely cold weather they have found it advisable to use small charcoal furnaces to keep the temperature at the right degree.

The one thing they have to guard against is the longtail, an insect that frequents mushroom beds, but a light sprinkling of insect powder through the loam will keep them away.

The mushrooms have to be picked with very clean hands, so the miners have to "clean up" before they can garner their mushroom crop. From the thousand square feet of beds the crop averages four bushels a week, or 80 pounds. The mushrooms must be picked while small, as they are more marketable "in the bud," more easily packed and less liable to break. During the winter months they will keep fresh for two weeks, but after that they turn black and cannot be used.

The pound boxes in which the mushrooms are packed cost one cent apiece. They are made of cardboard, with holes punched in the sides and in the cover to aerate the contents. On the lid of the box Krumlaugh has printed his name with the kind of spawn used and the guarantee of the mushrooms.

The nearest market pays 35 cents a pound, but the Krumlaughs have been lately marketing their mushrooms in Pittsburgh and Chicago, receiving nearly twice as much a pound, but the cost of packing is more, as the mushrooms are very fragile and break easily in transit, so must be packed carefully and then crated.

The discarded stumps cut off from the mushrooms are mixed with corn half and half and are fed to the chickens. They do well on them.

The compost of the beds has to be changed at intervals, and when it can no longer be used for mushrooms it is shoveled into the coal cars, wheeled out of the mine, and taken to the city in coal wagons, where it is sold for lawn and garden purposes.

In fact, just such business enterprise as is represented in this last item has characterized all of the work done in this underground farm. That enterprise has resulted in business for the owner of the place and has suggested to many others the commercial possibilities of farming above ground, where work can be done more easily.

As the Krumlaughs have plenty of available space in their mine, they are increasing the number of their beds as rapidly as possible, and they are looking forward to the establishment of an industry large enough so that they can enter the drying and canning business. They mean to develop their subterranean garden to its greatest possible commercial value.



Herbert Quick, editor of FARM AND FIRESIDE, walking through his Coolfont Farm peach orchard near Berkeley Springs, West Virginia



A thousand square feet of producing mushroom beds are in the Krumlaugh subterranean farm, Stark County, Ohio. Mr. Krumlaugh, holding a basket, and a miner are standing at the entrance of the passage-way leading to the farm

Attending a Tractor Show

Picturing Modern Farm Motors from the Factory to the Field



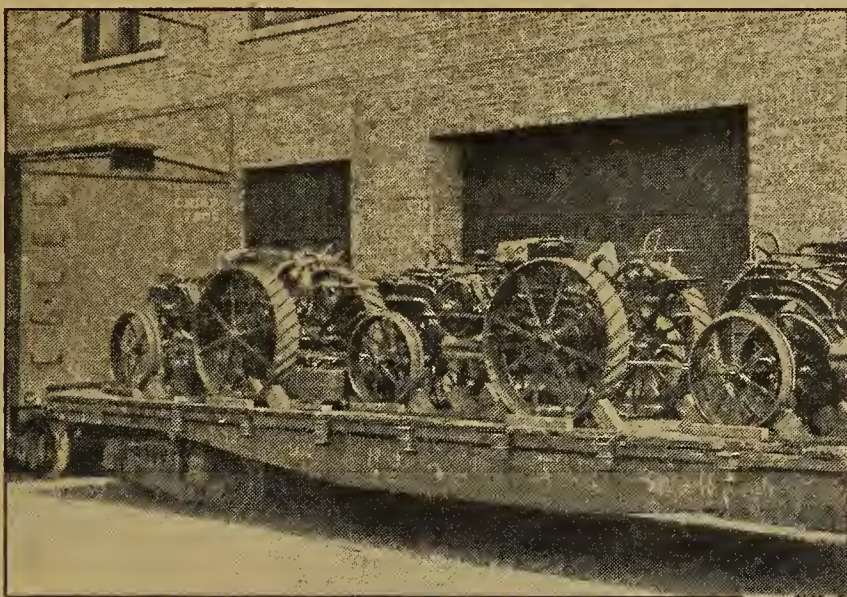
Five thousand persons from several States came to see the tractor plowing demonstration, even though the weather was very hot and threatened rain



In soil too wet to work well, and with weeds as high as the machine, this tractor is plowing two 14-inch furrows six inches deep without any trouble



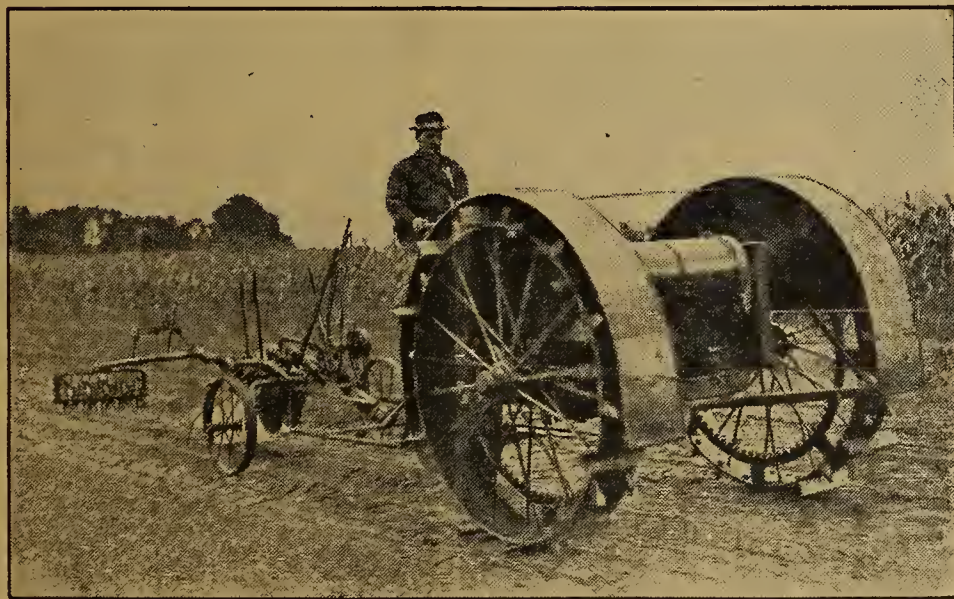
All of the steering but turning around is done by an automatic guiding shoe



Tractors that will pull two 14-inch plows with ease are small enough to be shipped six on one flat car. This proves to be a popular size



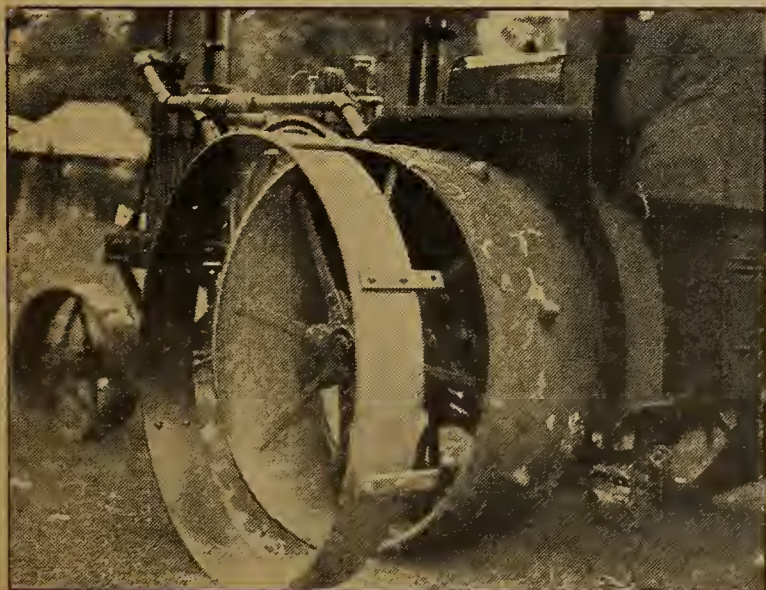
Pulling three 14-inch plows in a heavy weed growth is play for this motor



With the equipment needed in the demonstration the tractors were driven six miles from town to the field. Tractors average $3\frac{1}{2}$ miles an hour on the road



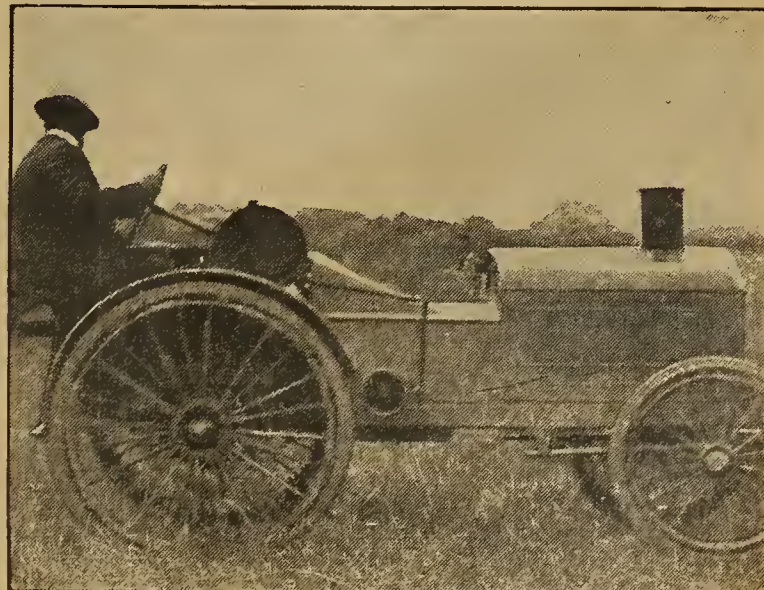
The wheat farmers that plow stubble immediately after harvest, and have a cornfield requiring cultivation at the same time, saw the value of a farm motor



An extension rim gives a tractor more footing in soft ground. Cleats and lugs can be bolted on rim to give extra traction



How tractors begin is shown by this inventor's model



With rubber tires this machine makes 12 miles an hour on the road; without the tires it pulls two 14-inch plows in sod



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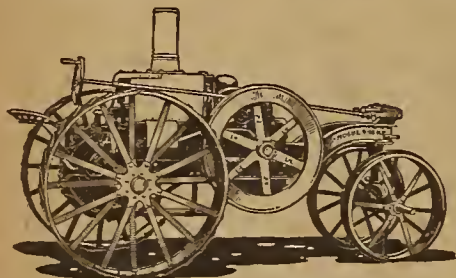
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When the farmers of this country appreciate all that a Mogul 8-16 will do, and the low cost of using it, there will be easier times for men and horses, and more work done, on thousands of American farms.

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International Harvester Company of America
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CHICAGO U S A

Selling War Horses

European Buyers Favor Western Animals

By JOSEPH HICKMAN

WHILE horses to be used in the European war have been bought in nearly every State in the Union, the West is the favorite field of the buyers, according to a member of one of the largest firms buying war horses in the United States.

"There is reason for this beyond sentiment," he said. "When the first Anglo-Saxon pioneers crossed the plains and came into the region that now forms our Western States, they encountered great bands of wild ponies. These were hardy little fellows weighing 700 pounds. At first they were not appreciated by the settlers, but it was discovered later that they had many virtues difficult to find in the horse of high breeding. Among these qualities are endurance and mettle—two qualities essential to a good war horse."

"Admitting this," I asked, "why should this make the Western horse of to-day better for war purposes than the Eastern horse of the same breed, admitting, as you must, that there are now but few of these wild bands in the West, and that the horses you are buying are horses of grade stock, weighing about 1,200 pounds?"

"Although, as you say, there are few of these wild bands on your ranges to-day, the horses I have bought and the horses I shall buy to-morrow, in fact every grade horse around here, has more or less of this wild blood in his veins. This is because the early settlers found the wild ponies serviceable and, later needing a horse of larger type, brought in stallions which they crossed with the native mares. The result is that the West has to-day a distinct breed of horse, intermediate between the cayuse pony and the standard types. The horse we find giving us the best returns from abroad is the one having more or less draft blood and a liberal amount of native blood mixed. This type of horse has made our firm famous abroad, for the spirit and endurance of an animal of this kind is surprising."

I had known that the cayuse pony was tough as a burro and spirited as a racer, but I had never thought of him as contributing to the popularity of the horses of to-day. It has not been so long ago that these little fellows could be found in vast bands running across the deserts of the Great Basin. Wilder than deer, they took to flight on the first approach of a human being or other strange object, and soon all signs of them to be seen would be a vast, rapidly vanishing cloud of dust.

Border Horses Drank at Dusk

Living on the border of one of these deserts as a boy, I remember seeing them, far away in the distance, come jogging down cautiously to the watering place. The most popular time for them to do this seemed to be at early dusk and at daybreak. After drinking, if not disturbed, they would start on their return across the desert, at first slowly, then one young stallion would bite another, in play, and soon the whole band would go rushing madly over the parched earth, raising a cloud of dust that enveloped them.

Near our home was a corral used by the cowboys when they went out to corral any of these wild ponies. It was a "post" corral, being pickets set in the ground, stump first, one closely by the side of the other. The trees from which these pickets were made averaged eight inches in diameter at the base, and tapered to a point about twelve feet from the ground. Of course they were not all of the same height, the result being that a finished corral was a formidable palisade, the top of which was an irregular line of pointed sticks. It was not unusual to see an animal attempt to leap this fence after being corralled and, falling, be transfixed by one of the pickets. There he would hang, struggling to free himself, tearing great wounds in his sides, until a bullet from a cowboy's pistol would put an end to his suffering.

In corraling a band of wild horses the riders should be well mounted, and stationed so as to form relays. When one rider is forced to fall behind, for the endurance of these little fellows is marvelous, a fresh rider can then continue the chase. The ground over which the chase is made is always more or less rough. Prairie-dog villages are not to be selected as ideal places over which to ride a horse at full speed, often this must be done if the pursuer follows the band.

The mounts are generally horses that have been captured on some previous chase or have wild blood in their veins. One who has not seen them go at top

speed over prairie-dog villages cannot realize how sure the ponies are of their footing. Often the holes are, on the average, not six feet apart. Occasionally a rider's horse will fall, sending him rolling in the dust. The other pursuers glance over their shoulders: if he shows signs of rising they go on; if he lies quite still, one will return while the others continue the chase; for once the band is caught up with it is an awful waste to let them escape. By far the greatest task is to get within striking distance of a band. Many times the wild horses start to run when the pursuers are five miles or more away. Being ever so well mounted, it is a most difficult undertaking to overcome such a great lead.

Once the lead is overcome, fresh riders well stationed, can drive the band in a circle until headed toward the corral. Going at topmost speed, the wild ponies soon reach the corral. Instinct seems to warn them of entering this enclosure, and at the gate a fresh number of riders find it difficult to keep the band together and get them into the corral. Always some of the strongest and most desirable animals escape. Some of these, however, are followed and lassoed in the open.

Lassoing not Common To-day

But the lassoing of a wild horse on the open desert is not so common, to my knowledge, as it is in art and literature. It is a most hazardous undertaking.

When a rope flies through the air and encircles the neck of one of these half-worn-out brutes the effect is marvelous. He seems to be possessed with all his original energy, and with a single leap will often so surprise the cowboy as to free himself and go kicking, biting, and squealing over the plains to freedom.

Once in the corral, the tale is different. All the kicking, biting, and squealing but add to the fun of the cowboys who in the center of the corral throw their lassos so as to catch by the forefeet the ponies they have selected. This brings the pony to the ground with much kicking and hard bumps. He is then fitted with a sort of rope halter and tied to the fence. When all that are worth keeping are thus tied, the others are released.

If, as stated by the Missouri horse buyer, it is the blood of these little brutes that has made the West famous as a producer of war horses, there should be something back of their present condition which would make them what they are.

History relates that the wild ponies had their origin at various Spanish missions, about 1700 A. D. At the Spanish missions of California horses multiplied so rapidly at one time that the vaqueros drove them over a steep embankment by whole bands in order to destroy them most easily, leaving the range for the cattle which were more valuable.

Why These Horses are Warlike

It is possible that the first wild bands of America originated through the Indians' stealing horses from the Spanish explorers. As concerned the West, this could have been as early as 1540, when Coronado started from Mexico and traveled north into what is now New Mexico, Arizona, Colorado, and possibly Utah. He had a large number of horses with him, many of which were doubtless lost. These alone, running unmolested on the plains, could have originated a band of wild horses. But it would be futile to surmise how the first band was started.

We have authority for the statement that the horses of the missions increased by useless numbers, and were driven off in order to leave the ranges for the cattle. This fact alone would account for the wild bands of America.

Driven off the most desirable ranges as the vaqueros drove them, the less hardy ponies died during the first severe shortage of feed. The more hardy ones lived and reproduced. The less hardy of the different generations died from lack of food, or were killed by wolves and other animals.

Then man came along, cultivated the land, built pastures, and infused in the wild blood of the ponies the blood of a larger type horse, which produced the war horse that is to-day the ideal of the buyers.

There are few wild bands of pure blood to-day, but there are millions of horses of larger and more serviceable type that owe their popularity to these wild bands which were once thought to be as useless as the barren soil over which they roamed.

A DOCTOR'S EXPERIENCE

Medicine Not Needed in This Case.

It is hard to convince some people that coffee does them an injury! They lay their bad feelings to almost every cause but the true and unsuspected one.

But the doctor knows. His wide experience has proven to him that, to some systems, coffee is an insidious poison that undermines the health. Ask him if coffee is a cause of constipation, stomach and nervous troubles.

"I have been a coffee drinker all my life, and when taken sick two years ago with nervous prostration, the doctor said that my nervous system was broken down and that I would have to give up coffee.

"I got so weak and shaky, I could not work, and reading an advertisement of Postum I asked my grocer if he had any of it. He said, 'Yes,' and that he used it in his family and it was all it claimed to be.

"So I quit coffee and commenced to use Postum steadily, and in about two weeks I could sleep better and get up in the morning feeling fresh. In about two months I began to gain flesh. I weighed only 146 pounds when I commenced on Postum and now I weigh 167 and feel better than I did at 20 years of age.

"I am working every day and sleep well at night. My two children were coffee drinkers, but they have not drank any since Postum came into the house, and are far more healthy than they were before." Name given by Postum Co., Battle Creek, Mich.

Postum comes in two forms:

Postum Cereal—the original form—must be well boiled. 15c and 25c packages.

Instant Postum—a soluble powder—dissolves quickly in a cup of hot water, and, with cream and sugar, makes a delicious beverage instantly. 30c and 50c tins.

Both kinds are equally delicious and cost about the same per cup.

"There's a Reason" for Postum.

—sold by Grocers.

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does away with the bushknife, grubhoe and shovel—it's better, quicker and cheaper. The forged sharp Cutaway disks penetrate deep, cutting roots, turf and trash and pulverizing the soil. Splendid for deep tillage. 2 horse and 4 horse. Reversible. If your dealer has not the genuine Cutaway write to us direct. Be sure to write us for our new book, "The Soil and Its Tillage." Get your copy now.

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Domestic Animal Furs

By R. S. WHEELER

LAST fall a lady was confronted by two rather tough problems. They were: To provide furs for the young ladies, and warm caps and mittens for the little girls. Secondly, to make some disposal of a large and rapidly increasing family of pink-eyed rabbits that threatened to overrun the place, but not lose too heavily on the rabbit investment.

She solved these problems very neatly by letting one solve the other in this way:

With a little instruction she converted the rabbit skins into soft, pretty fur from which, with an old set as a pattern, she made two serviceable as well as handsome muffs with the neckpieces to match.

Furs of the same quality and style would have cost her \$25 or more. She had, besides, fur trimming for a suit and the little girls' coats. Not a bad return on the rabbit investment. She still keeps white rabbits.

A man unable to sleep or keep song birds on his place on account of stray cats collected the cat skins and made them into a laprobe for which he has refused \$20.

Make Robe from Four Curs

Another laprobe, made from the skins of four sheep-killing curs, is the prized possession of the farmer who lost the sheep.

One of the nicest sleigh or buggy rugs I have seen was made from a big woolly dog's skin.

A certain fur-trimmed coat is much admired, but few imagine that the fur is just white rat. Another little soft gray coat is just a case of "rabbit skin to wrap the baby in"—just common wild rabbit, Molly Cottontail.

In fact, there are a number of animals right around whose skins are seldom used which would with a very little work or expense make very pretty and serviceable fur garments.

Mole, white or tame rabbit, house cat, white rat, and squirrel will make good fur caps, mittens, muffs, and trimming. Wild rabbit skin is not strong but the fur does well for trimming and lining gloves, mittens, and moccasins.

An invalid that has to live in the open air, but is unable to buy the necessary fur garments, is kept comfortable in the coldest weather by a big coat and shoe packs lined with wild rabbit fur.

Long-haired dog and angora goatskins make fine rugs and laprobes. Calf, colt, and deer skins, if tanned without the hair as leather, make fine gloves, work mittens, and moccasins. The house cat has a very tough skin that makes good leather for work gloves, as well as fur.

Any of these skins, as well as the more valuable fur skins, can by a little work and less expense be made into very pretty and serviceable fur or leather suitable for a number of uses. The tanning of a skin with the hair or fur on is not nearly the long, difficult job many suppose it to be.

The following method, if properly carried out, will tan any light skin, making it very soft and the fur will not shed:

All dry skins must first be soaked in water until as soft and pliable as a green hide. A green hide (one just removed) should have all the flesh and fat removed by scraping with a dull knife.

Wash the Skins Well

Wash well and let the skin soak from three to eight hours, depending on the thickness, in lukewarm water in which has been dissolved one-fourth cupful each of salt, alum, and saltpeter to the gallon. Pull and work the skins well while washing them.

Wring the skins out and stretch them, flesh side up, and rub in thoroughly a mixture of two parts fine salt, one part each of saltpeter and powdered alum, half part arsenic and, if for a heavy skin, add a teaspoonful of blue vitriol. Use plenty of this mixture and rub it in well, being sure to get it into all of the wrinkles and out to the edges. Place the skins flesh sides together, fold in the edges and roll tightly, keep in a moderately warm place. Rub in fresh mixture every two or three days and work the skins well each time.

The fur will not be at all injured by the juice brought out of the skins by the mixture.

A tame rabbit or cat skin will be tanned in about two weeks, depending on the amount of working they get. Just as soon as the mixture has gone entirely through the skin it is cured. Rinse well in lukewarm water to remove all of the mixture, and then wash in strong, lukewarm soapsuds. Use a washboard just as though washing a garment.

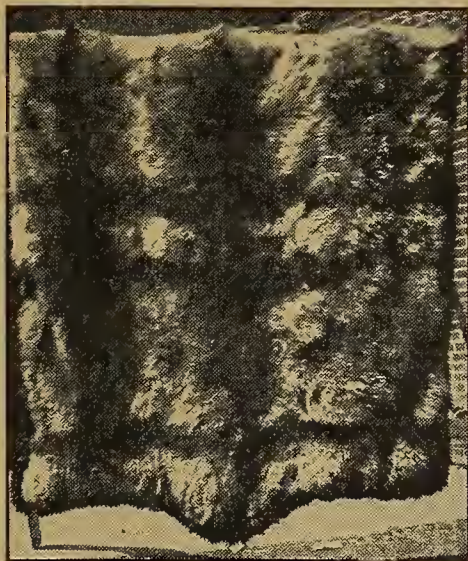
The skin of the tame rabbit is very tough and will stand hard working, but the wild rabbit skin is very thin and must be handled more carefully. If the fur is badly matted or tangled, comb while under water with a coarse comb. Wring and shake the water out of the fur and hang up, tail end down, in the sun to dry. When partly dry, begin working the skin and work it entirely dry.

The more a skin is pulled and worked while drying the softer it will be, and the same applies all through the tanning process; the more it is worked the better and quicker it will tan. A good way to work a tough-skin fur is to pull it round a square-edged post or over the edge of a board, flesh side in. A little warm neatsfoot oil worked into the skin after it is dry will make it softer and help to keep it so should the fur get very wet. If the skin has been properly tanned it will be perfectly white and as soft as kid. If it is not so, put it back in the pickle and let it stay until it is soft.

Caution: Do not use hot water. A wet or green hide will burn in hot or very warm water. Barely lukewarm is hot enough.

This is how you can tell when the skin is cured: When it is drying, after having been washed, the edges or places where it has not been worked will look something like rawhide, that is smooth, rather clear, and of a darker color. If when pulled tight and rubbed hard over the knuckles it stretches out and turns white, you may be pretty sure the tanning mixture has gone through and that the skin is cured.

If desired, a pretty tan color may be given the skin by mixing yellow ochre in the neatsfoot oil or in the last wash water.



A dogskin laprobe

A light skin may also be cured by the oil process, as follows:

Saturate the skin with warm tanner's oil—fish oil—after it has been washed in the salt alum water, as directed for dry tanning, roll up and keep in a warm place. Rub in fresh oil often and work the skin each time. A light skin should tan in about three weeks.

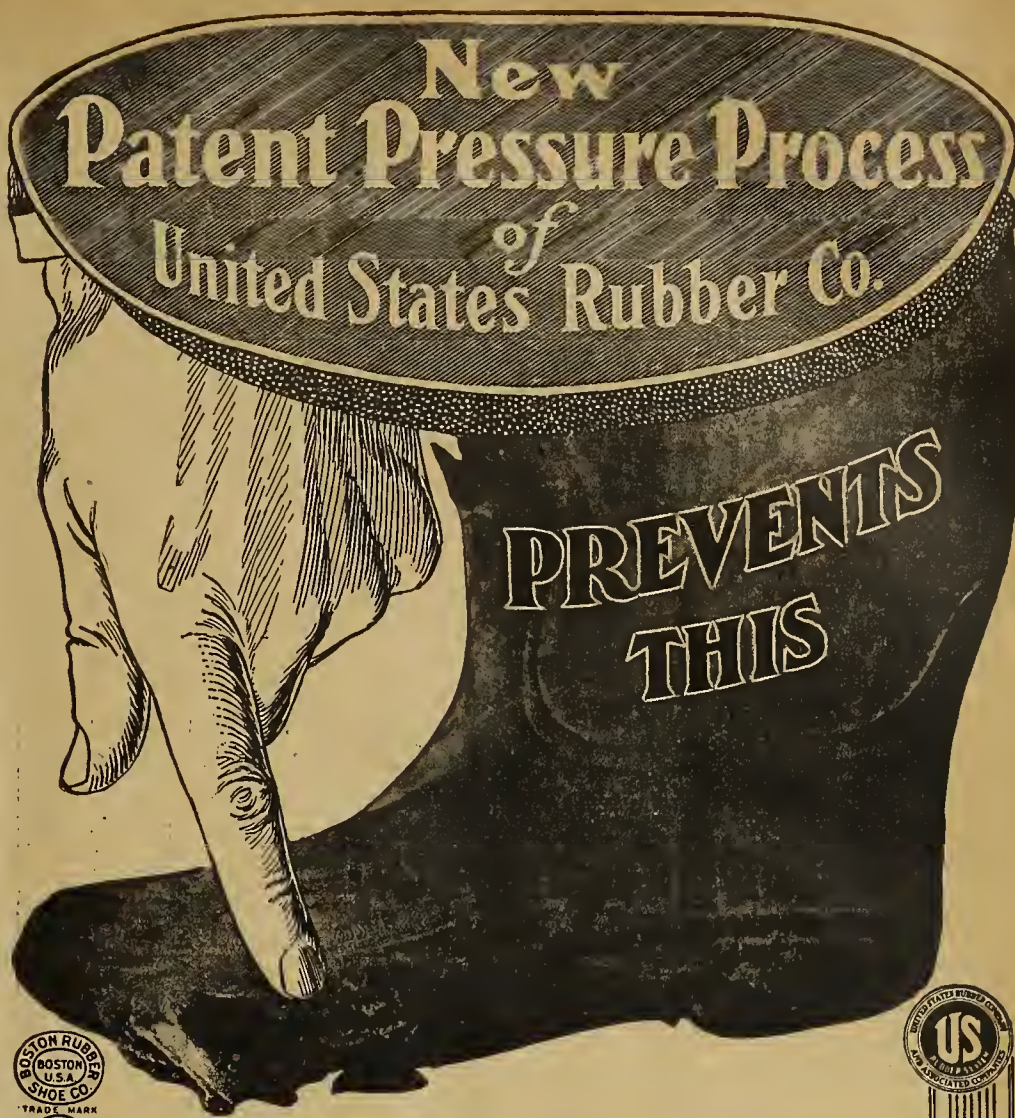
Wash well in warm, strong soapsuds and dry as directed. If the fur is greasy, wash in weak lye water, or put a little ammonia in the last water.

Usually only a part of each skin is used when making up the furs. They are matched and pieced, and if this is properly done the seams will not show. Match up the furs with the hair running the same way, and mark on the flesh side where they are to be cut. With a very sharp knife cut only just barely through the skin and pull the pieces apart. In this way the hair is not cut as it would be if shears were used or the knife allowed to go clear through. The hair on the head-end piece thus overhangs the cut and the seam is hidden. Sew with a baseball stitch or over and over very close to the edge and press the seam down flat.

The fur may be sewed before it is dyed, but it is usually better to dye the skins and then match them up, as some parts may take the dye better than others.

HAVING fun is a habit. A community in which recreations have been neglected will wonder after a year or so of organized fun how it ever got along without it.

THE following method is recommended by the Nebraska Department of Home Economics for setting the colors of washable fabrics. For yellow, tan, and brown fabrics, dip, before washing, in a pail of water in which is mingled a cup of vinegar; for blues, reds, pinks, and blacks use a cup of salt in a pail of water.



Stronger, Longer Wearing Rubber Footwear is Made by This New Vulcanizing Process

Granting that a rubber boot or shoe is properly constructed, there are just two ways by which to increase the amount of wear it will give.

One is to mix a very tough rubber compound, and the other is to vulcanize that compound by a process which will give it added wear resisting strength.

The United States Rubber Company has invented and owns exclusively the patents upon a new process of vulcanizing for rubber footwear. This process has been named—"Patent Pressure Process of the United States Rubber Company."

The new process welds all the pieces from which a boot is made into an article with just as much strength as though it were made of one piece. Moreover it gives to the rubber compound the tremendous wear resisting strength.

Standard color, black. Also made red or white.

Nearly all reliable dealers sell "U. S." Patent Pressure Process Heavy Service Rubber Footwear. If your dealer has none, write us, telling what kind of boots you wear. We'll see that you are supplied. Look for the seal—insist upon it.

United States Rubber Co., New York City

Look for this Seal



Vertical Farming Proved

By Effects of
Orchard Blasting With

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**Red Cross
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IN
DUG
HOLE

These cuts are made from photos showing comparative growth of pear trees from Spring of 1913 to August, 1914, Bellemont Orchards, Inc., Norfolk, Va.



IN
BLASTED
GROUND

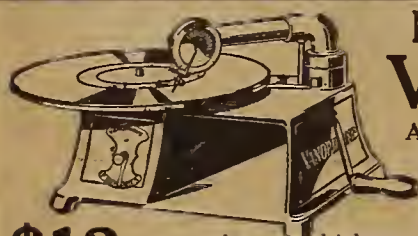
ALL progressive farmers and orchardists know that trees planted in blasted ground grow much faster than those planted in the old way and bear fruit earlier. This proves the truth of the principles of Vertical Farming, which aims to cultivate downward as well as to till the top soil.

Three years ago tree planting in blasted holes was experimental—now millions of trees are set out by the Vertical Farming method every Spring and Fall.

In like manner, blasting the subsoil to increase general crop yields, now regarded as experimental, will in a few years be common.

To learn how and why Vertical Farming may double the yields of your farm, get the **Free Reading Course** in Vertical Farming by Dr. G. E. Bailey, one of the best works on soils and soil culture ever published. Sent free with every request for our Farmer's Handbook No. 90 F. Write now

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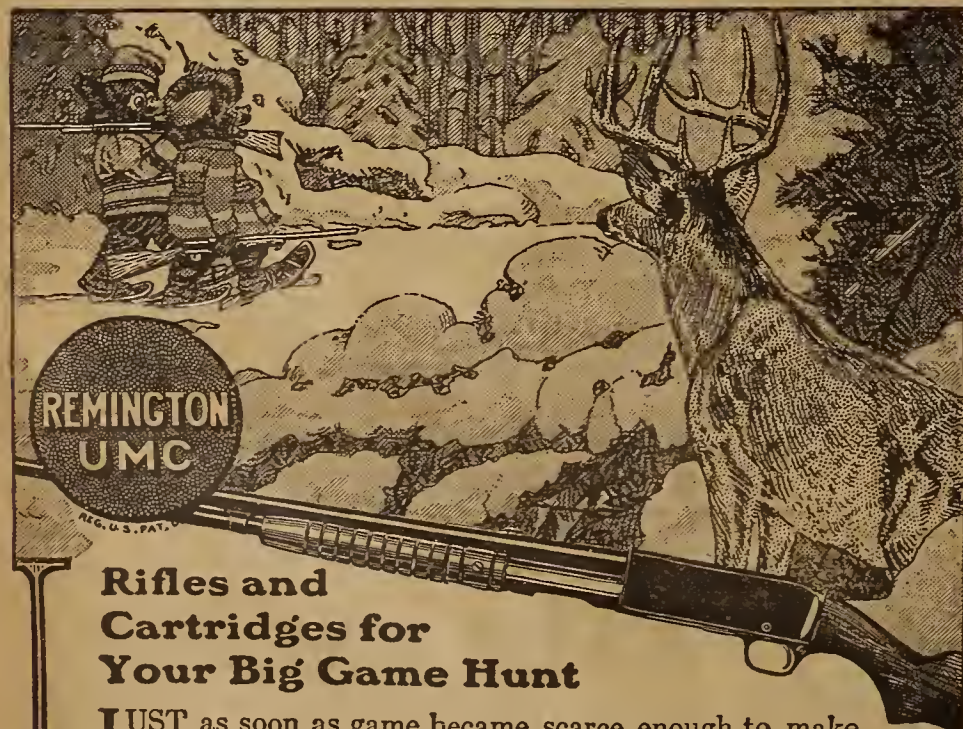
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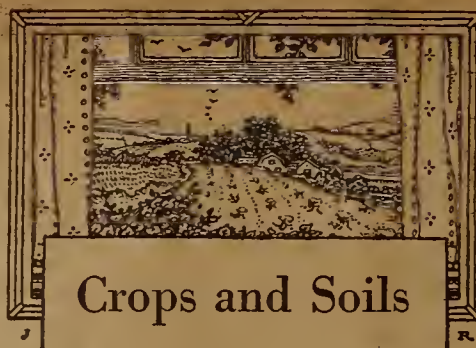
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The demand for Remington-UMC Big Game Rifles and Remington Metallic Cartridges has been growing ever since.

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Crops and Soils

Plow Paragraphs

AMAN plowing with a 12-inch walking plow walks a little over ten miles for every acre turned under.

IN SPITE of the growing use of tractors only one acre in twenty thousand is plowed by mechanical power.

For a 12-inch walking plow, whiffletrees should never be over three feet long. For a 14-inch plow, not over three and one-half feet. Traces should never pull down on the hip straps.

A PROPERLY adjusted walking plow will run best in ground clear of stones, stumps, and roots when you grip the handles but lightly. Too firm a grip throws the plow out of balance.

WITH a six-horse team and a triple gang plow one man can plow ten acres a day with less effort than he could plow two acres with a walking plow. The triple gang plow is about the largest practical one-man outfit for use with horses.

THE best plows for hard or sticky gumbo soils are probably those with flat-bottom mold boards. These are made of heavy steel slats about an inch and a half wide and three quarters of an inch apart. They run in the direction of the ordinary moldboard curve. There is less area in such a moldboard, consequently the pressure is greater per square inch of what surface is there and the plow will scour.

Swat the Weeds

By G. L. Rothgeb

IT IS a hard fight for an individual farmer here and there, no matter what pains and expense are taken to keep weeds under control, but if all farmers are interested there is little trouble or expense in keeping farms clean.

There are two very important points in connection with this subject. One is a short crop rotation and the other is keeping fence rows clean.

The rotation that has been in general use in this section—the northern part of Virginia—is corn, wheat twice, mixed grass being sown with the second crop of wheat. This grass is generally made into hay for several seasons, then used for pasture as long as possible. A better rotation for the purpose of weed eradication, and fully as good in other respects, would be corn twice, wheat and mixed grass. Sow rye or crimson clover at the last working of the first corn crop, to be plowed down in the spring. This seed should be sown ahead of a small tooth cultivator. For this purpose we use a five-tooth, one-horse cultivator, going once in a row each way, running the cultivator very shallow. In preparing your field for corn, cultivate thoroughly before planting and don't be afraid some neighbor will beat you planting corn. After corn is planted, harrow with a spike-tooth harrow before corn comes up. This is very necessary if a crust has formed before corn comes up. After corn is well up, give ground a good, deep cultivation each way. After that a skim through once in a row with the five-tooth. Every week or ten days will be sufficient, and here again don't be afraid Friend Neighbor will beat you "laying by" your corn.

Last year I cultivated a piece of corn planted June 11th the last and eighth time on September 1st, and this piece made 54 bushels per acre in spite of a dry season. The average crop in this section last year was about 30 bushels.

Sow wheat after the second crop of corn with mixed grass the same as in fallow wheat. The same care should be used in preparing corn stubble for wheat and grass as is used in preparing land for corn; and again, don't get nervous if you see some fellow begin to seed wheat about September 20th, but keep the harrows, disk, and spring-tooth going. Sow timothy in the fall, mixing it with fertilizer about ten pounds per acre, and about eight pounds of clover and two pounds of alfalfa in the spring behind a good, sharp spike-tooth; and again, don't get nervous. You won't hurt the wheat. Now when your grass is ready to cut, do it; but don't wait for weed seed to ripen. Experiments have shown that timothy

hay is most digestible when bloom is falling. Another reason for cutting early is that it or any crop makes heaviest draft on soil fertility when seed is ripening. Another thing, your next crop will be all the better if the previous crop was cut at the right time.

A little alfalfa is recommended for purposes of soil inoculation, as enough plants will likely grow to encourage alfalfa bacteria, making it unnecessary to inoculate later if a crop of alfalfa is wanted.

As an aid to your grass' choking out weeds, sweeten your soil with burnt lime or ground limestone. If you think it will not be necessary to use a sweetener, try an acre and convince yourself. About one ton of lime or two tons of limestone will be sufficient for several crop rotations.

A mixture of mammoth clover or alsike will give a more even stand.

Now as to fence rows. They should be cleaned at least twice a year. First time a mowing scythe will answer. This should be directly after harvest. The second time, about the middle of August, use a brier scythe and a sharp, broad mattock, and get 'em all. Odd corners and rock brakes should have the same treatment as fence rows.

Wherever possible, fields should be pastured, if only for a short time each year. Sheep are about the best scavengers, but a few old hungry cows are nearly as good. Now, altogether! Swat the weeds!

EDITOR'S NOTE: Here is a fine plea for co-operation in getting rid of weeds. Nobody can find fault with that. It is gospel truth. Many will not agree with the rotation suggested—which clearly would not do for some localities. It is, however, the practice which a practical farmer has worked out for his conditions, and every such plan has a lesson for every region. Perhaps some other experienced men in eradicating weeds, largely through rotation, can add to the discussion by suggestions and criticism of Mr. Rothgeb's plan.

The Artist Correct



The man who drew this picture said that here was an individual who was open and above board

Germany Has Potash

GERMANY has a practical monopoly of the potash supply of the world. She is not so independent as to nitrogen, but is increasing her production of nitrates taken from the air by electricity in the form of cyanamids, and has the monopoly of the cheapest method of artificially making ammonia. And she gets an abundant supply of phosphorus in the form of Thomas slag from her iron works. As long as they are running she will not suffer for the lack of phosphorus.

PLANTS, like animals, are warmer inside than the air about them. This is especially true in winter.

ALFALFA will stand a lot of pasturing by hogs if the swine are not allowed to go upon it when the ground is wet. It is a mistake, however, to pasture it too short.

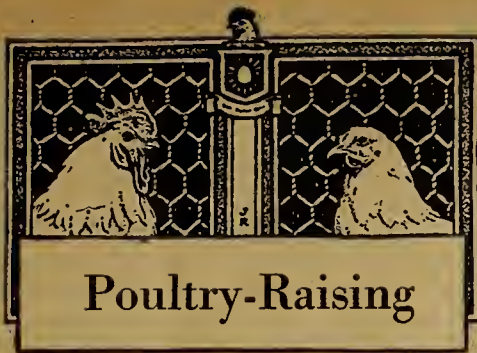
ALMOND growers in California are facing an increase of 500 per cent in their crop. The old story of overplanting any crop borne by a tree—especially a long-lived tree.

A WISCONSIN test showed that we get 24 per cent more out of our corn stover by shredding it. The live stock like it better and can eat it up cleaner than the stover in the stalk.

Seed-Corn Storage

WHY do so many of us who ought to know better make the mistake of keeping seed corn in improper places?

Any place that has a dry atmosphere and an even temperature above freezing is good for storing seed corn. Among the best are a well-ventilated attic, furnace-room, or vacant room in the house. Whichever place is selected, it must be fairly warm and well ventilated until the moisture is out of the grain and cob. Do not store seed corn in corn cribs, barns in which live stock are kept, or any places where the air is damp or changes of temperature are sudden. Select the seed ears when fully ripe and then dry them so that freezing will not cause ice to form in the kernels and weaken the vitality of the germs.



Poultry-Raising

Large Hens Eat Much

By John L. Woodbury

THE cost of feeding some Leghorns I had was \$1.25 for each bird for the year, while the cost of feeding Columbian Wyandottes was about \$1.75. Large birds demand more feed than small ones.

I had three pens side by side containing consecutively 18 Brown Leghorn pullets and cockerel, 17 yearling Columbian Wyandotte hens and cock, and 16 yearling Brown Leghorn hens and cock. The pullets were all early hatched, laying, and practically as large as the hens of the same breed.

In each pen was a hopper of dry feed and a closed feed box in which a mixture of cracked corn and oats was kept.

Beginning the morning of February 1st, every ounce of grain that went into these boxes was carefully weighed and accounted for. A highly concentrated laying mash was kept before the birds at all times. Twice a day they were given all the oats and cracked corn mixture they would scratch out of the litter. I fed no wheat, as the price was prohibitive. While I esteem wheat highly as a part of the ration, I find I can make the birds pay without it.

The night of March 2d, after exactly thirty days of experimental feeding, the accounts of the respective pens showed as follows:

Pen 1—18 Leghorn pullets and cockerel.
 55½ lb mash @ \$2.05 per cwt. \$1.13
 27 lb c. corn @ \$1.55 per cwt.42
 22½ lb oats @ \$2 per cwt.45

Total cost of feeding 19 young Leghorns 30 days.....\$2.00

At this rate the cost of feeding this pen twelve months would be \$24, or \$1.26 per single bird for the year.

Pen 2—17 Columbian Wyandotte hens and cock.
 79¾ lb mash @ \$2.05 per cwt. \$1.63
 31½ lb c. corn @ \$1.55 per cwt.49
 26¼ lb oats @ \$2 per cwt.53

Total cost of keeping 18 C. Wyandottes 30 days.....\$2.65

The cost of keeping this pen twelve months was \$31.80, or \$1.76 per single bird for a year.

Pen 3—16 Leghorn yearling hens and cock.
 43¼ lb mash @ \$2.05 per cwt. \$0.88
 31½ lb c. corn @ \$1.55 per cwt.42
 22½ lb oats @ \$2 per cwt.45

Total cost of keeping 17 old Leghorns 30 days.....\$1.75

Cost of keeping pen twelve months \$21, or \$1.24 per single bird for one year.

Of course, for strict reckoning two or three cents should in each case be added to the yearly cost per hen, as reckoning thirty days to the month leaves five days unaccounted for. A small amount for grit and shells should also be added.

Large Hens Laid More

However, the above figures for the year are doubtless too high for several reasons. First, fowls will probably eat considerably more in winter than in the warmer months. Second, I fed no cabbage, potatoes, or other cheap foods during the experimental period, as it is not always easy to compute the cost of these. Third, there is an interval of from four to six weeks when fowls are in the worst stages of the molt that they eat comparatively little.

In my judgment, the smaller strains of Leghorn hens in confinement could be kept with grain at the above prices one year for little more than \$1, and the Wyandottes perhaps for close to \$1.50.

If allowed free range a portion of the year, these figures could be reduced considerably. But the added cost of keeping the Wyandottes over the Leghorns would be close to 50 cents a year per hen. The margin with Orpingtons and Brahmas must be even greater.

The respective egg production of the three pens included in my experiment for the thirty days was for the 17 Columbian Wyandottes a total of 306 eggs, or an average of 18 to each hen; for the 18 Brown Leghorn pullets a total of 333 eggs, or an average of 18½ per head. The Leghorn old hens did not do so well, as I intended using many of them for breeding and had not previously fed

them to force egg production. Several of the Leghorns in pen 3 did not lay an egg during the entire period. The total yield of this pen was 225, or slightly over 14 eggs per hen.

The weight of the fowls in none of the pens was heavy for the breed. The average weight of the Leghorn pullets was not far from 3½ pounds, the cockerel weighing 4 pounds 5 ounces. The Leghorn old hens averaged 3¾ pounds, the cock going slightly over 5 pounds. The Wyandotte females averaged about 5¼ pounds and the cock weighed 8 pounds 2 ounces.

I have found that fowls dress away, when drawn, about 25 per cent, the smaller birds losing a little more proportionately than the larger ones. Assuming that the Leghorn old hens would average to dress 2¾ pounds and the Wyandottes 4 pounds, they would bring respectively, at a market price of 20 cents per pound, 55 cents and 80 cents each, a balance of 25 cents in favor of the larger bird. But the larger breeds sell rather more rapidly in city markets, and often at an advance of one or two cents per pound over the fowl with smaller and less meaty carcass.

For choice lots of Wyandottes, Plymouth Rocks, etc., fancy prices may sometimes be secured, as compared with prices for small breeds.

The brown eggs, too, laid by the larger breeds may generally be said to bring about two cents more per dozen in the best New England markets.

It will be noticed in the figures given of my test that it was in the mash the greatest margin of difference in the cost of feeding appeared. The larger birds consumed but little more of the corn and oats, but they never seemed to get their fill of the mash. Once when I allowed their supply of this to run out and was renewing it when quite dark, they actually came down off the roosts and ate away greedily in the semi-darkness.

By dealing out the rations in small quantities I found, as I supposed, that fowls eat unevenly on different days. For instance, the Wyandottes in one case consumed 9 pounds of mash in three days, and in the following three days but 7½ pounds. While if in either pen the occupants stuffed themselves in an unusual degree on the whole grains at the afternoon meal, they took hold of the same a bit slower in the morning, which shows the folly of laying down any hard and fast feeding rules.

Automatic Hopper Dozers

"HOPPER DOZERS" in which grasshoppers are ensnared have given very good service in some of the Rocky Mountain States and adjacent areas.

Now automatic hopper dozers are being advocated in Oklahoma in the form of great flocks of turkeys. Mr. R. P. Richardson reports that his wife has a large flock of these animated hopper dozers which eat the grasshoppers as fast as they hatch.

Lay Low the Fly

POULTRY HOUSES and poultry yards constitute bad fly hatcheries unless preventive measures are taken.

The accumulations on the dropping boards and under the roosts left for only a few days become a live mass of maggots which in a short time increase the fly population of the farm by millions.

Even when the poultry houses are regularly cleaned every few days and the manure stored in ordinary boxes or barrels, the fly eggs continue to hatch and the maggots wriggle through cracks to the ground, and the fly increase goes on just the same unless the manure is treated with borax, hellebore, or some other effective preparation.

Experiments have shown that borax is the most reliable and effective preparation, and the expense is also less.

The plan followed in treating manure in this way is to have can dusters of borax in the poultry houses and sift a little of the borax over the dropping boards, or under the roosts, where no dropping boards are used, making sure to sift the borax thoroughly along the edges where the fly maggots will move when leaving the manure to escape into the ground.

Only a small quantity of the powdered borax is required—an ounce or a trifle more being sufficient for each bushel of manure treated.

The cost of borax in 100-pound lots obtained from mail-order houses or other wholesale channels should not be over five or six cents a pound, and about nine cents purchased by the single pound. The cost per hen for treating the manure during the fly-breeding season need not exceed a half-cent a bird.

Treated with this quantity of borax, the fertilizing value of the manure is now considered uninjured if not more than 15 tons of the treated manure is applied to the acre.

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HERBERT QUICK, - - - - - Editor

October 9, 1915

Cotton and War

COTTON has been declared contraband of war. This is a terrible blow to the cotton planters, but by strong financing and with a decreased acreage it is hoped that the planters may escape with losses not greater than those of last year. It is even possible that they may do better.

Cotton has been declared contraband because it is used for ammunition. Nitro-cellulose is guncotton—merely cotton treated with chemicals which make it explosive. In every great artillery battle thousands and thousands of bales of cotton are shot away.

Cotton has always been the football of war, and inevitable hard times come to factory workers as well as growers when the shipment of it is stopped. In our civil war the supply of cotton was shut off from the English mills, and the people in the Lancashire district were plunged into the deepest poverty and want. Thousands would have died of starvation had it not been for charity. Yet these poor people had the broad-mindedness to pass resolutions at their meeting congratulating our President Lincoln on the abolition of slavery, even though it was the war which liberated the slaves that reduced themselves to starvation.

On January 19, 1863, Lincoln wrote these cotton workers a letter in which he said: "I cannot but regard your decisive utterance upon the question as an instance of sublime Christian heroism which has not been surpassed in any age or in any country."

New Source of Potash

WHERE, we may be asked by almost any schoolboy, does the potash come from which is naturally found in the soil?

Most of it comes from the disintegration in the soil of certain stones. The commonest of these are two kinds of feldspar and one of mica.

Why not get potash from feldspar—the most common of the potash stones—instead of sending to Germany for it, or digging it out of mines to be opened up in Texas, Nevada, or Utah, or making it from the great seaweeds of the California Coast?

The answer is that no method has yet been put in effect by which the potash in feldspar can be separated cheaply from the aluminum and other substances which make up feldspar.

There is a good deal of farming interest, therefore, in the fact that a New York chemist went the other day to Doctor Norton, a chemist in the employ of the United States Government, and described to him a method discovered by him of solving the problem. Doctor Norton has been quoted as saying that the new method had been tried on 100-ton lots, is chemically correct, and in his opinion offers a prospect of cheaper potash than do the giant kelps or seaweeds.

We all want cheaper potash. We shall need it more and more as the years pass. Feldspar is almost as common as lime-

stone, and the new method is news of the greatest importance.

The war is an ill wind, but it may blow the world some good if it forces invention to such achievements as this.

Pretty School Teachers

SHALL we come to the point of requiring a beauty examination as well as one in the commoer branches for our school teachers?

Must the school-ma'am of the future emulate the Venus de Milo in physical charms, as well as try to approach Minerva in wisdom and Hypatia in learning?

It seems so, if we are to accept the dictum of Dr. Henry S. Curtis, a New York play expert, who, in an address to Kansas teachers, is quoted as follows: "Every American boy and girl has an inalienable right to have a good-looking school teacher, and school boards should be willing to pay fifteen dollars a month more for comely instructors than for homely ones."

Let us not make too literal an application of this. There is something in it, but we must give the right sort of

Lettuce 3c a Barrel

A NEW JERSEY farmer, after working to produce first quality head lettuce, received, according to a New York paper, only \$1.60 for 50 barrels of it. Three cents a barrel!

"Would it not be possible," says this newspaper, "for the City of New York, where five millions of people must eat, to arrange on a saue basis for selling? Could there not be food markets where the surplus could be auctioned off while it is fresh? Could there not be arrangements as to what food can be got cheaply and at what prices, and where?"

The price of three cents a barrel for head lettuce is exceptional—but not unusual.

Peaches are rotting in ten thousand orchards as this is written, and millions of children in this land will not taste a peach this year.

As the paper states, this collapse of civilization in feeding its people is solely due to lack of organization.

The farmers are not organized. The laws make it hard for them to organize. The governments do not help them to

Chicks That Came from Unlaid Eggs



THREE chickens, hatched from eggs that were never laid, composed the interesting part of a window display of poultry remedies in my drug store recently. The idea came to me several months ago when I was planning future window displays.

Three laying hens—a White Orpington, a Rhode Island Red, and a Back Minorca—were killed. I obtained an egg from each hen. The shell of the White Orpington egg was not fully developed, so I used gum arabic and adhesive plaster to finish the shell.

The three eggs were placed in an incubator, and hatched out three chicks, a white one, a black one, and a red one. The chicks are roosters and are now large enough to crow.—MYLO CULLER.

meaning to the words "good-looking," "comely," and "homely." Elizabeth Barrett Browning was not a pretty woman, and Madame Montessori is no beauty; but it is fairly sure that the children would weep with sorrow on the last day of school if either of them were to teach any rural school for a term. Some of the greatest women in the profession are what one would call homely.

What a teacher should have is charm—the quality which makes the children sorrowful to be parted from her for even the few weeks of a vacation. Charm is the outer manifestation of inward graces. Charm is loveliness, and many a beauty is utterly without it. Charm comes from magnanimity of spirit, generosity in little things, love to all in the heart, cleanliness of person, neatness in clothing, taste in dress, intelligence in human relations, tact, and diplomacy.

These are qualities which every teacher may hopefully strive to attain—and every person who is not a teacher. The possession of these qualities will make any girl a fine teacher, even though she be as homely as—as George Eliot was.

A Peace Victory

AFEW months ago there were 100,000 cases of typhus in Serbia, and the new cases numbered 10,000 a day. The American Red Cross and Rockefeller Institute stamped out the disease in less than four months by the simple system of ridding the population of lice. The most wonderful medical campaign in all history, it ranks in importance far above any military campaign of this greatest of all wars.

organize. Their own standpatism keeps them from organizing.

The farmers alone cannot cure the evil. It takes city organization too. Huge, selfish, greedy interests stand between producer and consumer and fight like demons whenever an attempt is made to bring them together.

They must be fought and whipped before anything effective can be done to regulate the food supplies of the cities, to save waste by preventing gluts, to see that there is a wise distribution.

Will this newspaper and its fellow newspapers take on the job of organizing the city people so that organizations of farmers may have real consumers with whom to do business on a real Standard Oil Company scale? If they will, the farm press will take on the job, we believe, of furnishing the avenues of publicity through which the work of organizing the producers may be carried forward to success.

Have a Good Time

IN BOTSFORD'S History of the Orient and Greece it is said of Pisistratus, tyrant of Athens:

"He provided the peasants with rural festivals, especially in connection with the worship of Dionysus, in order that country life might seem to them attractive and complete in itself."

If to a Greek tyrant 2,000 years ago social life in the rural districts was known to be so important, it would appear that the free farmers of America ought to recognize its importance to themselves, their families, and their communities. Without amusements and

festivals country life is no more "attractive and complete in itself" for the farmers of America than it was for the peasants of Greece in 515 B. C.

Sweet Peas for Field Use

IN NEW MEXICO the sweet pea has proved an excellent cover crop for orchards. It is planted in the fall in time to reach a height of some inches, and in that climate it lives over winter. It is turned down in May. Its ability to withstand the cool weather of winter is its most excellent quality.

Our Letter Box

Practical Education a Necessity

DEAR EDITOR: In a recent number of the FARM AND FIRESIDE the editor published an exceedingly important article concerning the advisability of a young farm boy, nearly through high school, leaving home to go to college. The boy in question is the only son of his father, who needs his help but does not like to stand in the way of his advancement.

The boy can have his chance, and his father need not be altogether deprived of his services either.

I have had particularly good chances to see what young people get out of a college course. I left the farm at the age of thirty-five to get a professional education. Since that time I have earned two degrees from two professional colleges, and have practiced my profession for twenty years in a college town. During that time the goodwife and myself have had in our family at least twenty-five self-supporting college students who were earning their way through college.

I would like to say to every boy and girl thinking of going to college: Do not think of taking a college course until you have made up your mind very decidedly what you want your life-work to be.

A college course in itself, without any particular end in view, simply gets you nowhere.

Many a college graduate has been relegated to drive a team or dig ditches because he had not been taught how to do any one thing sufficiently well to make a livelihood out of it. Most boys and girls just out of high school need to go out into the world for four or five years, to broaden their minds and enlarge their understandings, before they decide what their vocation is to be.

Many of the most efficient and successful college men I have ever known taught country schools for three or four years after leaving high school, and worked on the farm during the summer. Every young man and woman should learn to do some one thing well.

There is probably a bigger future ahead of us for agriculture than for any other art or science.

WILLIAM M. GREGORY, M. D., Ohio.

Likes Dry Farming

DEAR MR. EDITOR: Just subscribed for your paper. We have received the second copy. I'll have to stand up for my country against that article by D. M. Hatch, "Suare in Dry Farming."

I was raised in the Miami Valley near Waynesville, Warren County, Ohio. I came to New Mexico six and a half years ago and have lived on a claim about all of that time. The rainfall has increased every year since I have been here, and I have never seen a crop failure. There was as nice corn raised here as I ever saw raised on the black bottom land on my father's farm, and other crops in accordance. Prospects are for a good crop this year.

We are forty miles from the nearest railroad, so naturally we handle stock, but we are not worrying about not being able to raise feed for them. Those that are near enough to market are making good with grain.

Yes, we have boomers and locators, but they are out for business the same as any Eastern man.

Our life is a fight, that is true; but the victory is worth it, and it is no place for a man without grit and backbone. We don't want him.

We are making good and are here to stay where there is some chance for a man to get ahead, and a home on a government claim beats being cornered up in a flat, no difference how poor the claim might be. Few claims are all bad. We raise everything we did in Ohio, and a lot of other things that I never heard of until I came West, and our climate is much pleasanter than in Ohio. Our young orchard is looking fine without irrigation.

Mrs. L. B. Faus, New Mexico.

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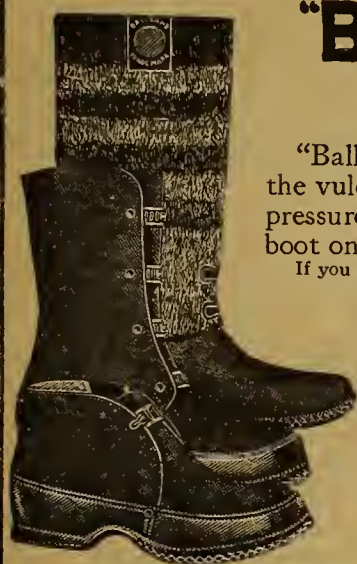
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Incidentally, have you sent for your copy of

**The ABC of Home
Painting**

a little book written by a practical painter, telling just how to paint, varnish, stain or enamel everything in the house and on the farm? Send for a copy.

Going to Market

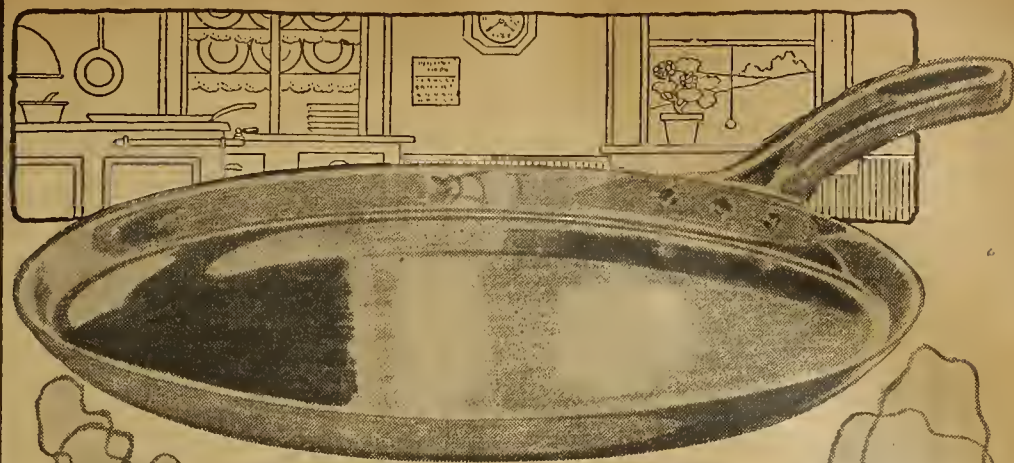
is a mighty interesting game for both young folks and grown-ups. It's good training, too, for anyone who buys or sells in the markets. Sent for 10 cents in stamps.



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30 x 3 1/2...	6.00	7.00	2.70	3.00		
32 x 3 1/2...	7.00	8.00	2.80	3.10		
33 x 4...	9.00	10.00	3.90	4.35		
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Live Stock—Dairy

Put Corn in Silo

By Ellsworth Brown

MORE feed can be obtained by putting the corn crop in the silo than by utilizing it in any other way. That is my answer to the question you asked in a recent issue.

Just how much greater value the silage has over unsiloed corn depends upon the manner and methods of putting the corn into the silo.

Silage to be good and to "feed out" well should be composed of nearly ripe corn.

Dried stover cut into the silo with any amount of water mixed with it does not quite come up to freshly cut corn in feeding value.

There are men who husk the corn, then put the fodder into the silo. Corn has a greater value outside of the silo than inside in such a case.

Silage that tends to lower the feeding value of the corn crop can also be made by planting the big Southern corn that does not ripen early enough.

In consideration of all these conditions it is difficult to estimate the value of the corn crop when placed in the silo over the corn utilized in any other way.

There is great loss of fodder when fed to stock, especially if the dry fodder is not cut up, and even then there is considerable waste. When the corn crop is properly made into ensilage the waste is very little. One experiment station estimates the loss of good ensilage at about two per cent.

Corn that has been husked and the fodder fed to stock without being cut will entail a loss, at a guess, of 20 per cent.

The silo is one of the best-paying features of the farm. It is a satisfaction to have a field of corn cut and placed into a silo, all ready to feed, and all in one day's time.

A Sun-Trap Hog House

By C. R. Esthavan

HERE is a hog house that was evolved from the thirty-five years' experience of an Iowa breeder. It was the third building he had erected for the purpose, and each served a number of years. Each new plan retained the best features of the old and, as might be expected, possessed improvements that were the outgrowth of actual experience. The building described here was in constant use for seventeen years on a Warren County, Iowa, farm until the retirement of the owner and builder, A. H. Jeffrey, five years ago, and is still doing good service for the new owner.

The plan was shared by Mr. Jeffrey with several of his fellow breeders whom he met at the state fairs and swine breeders' meetings, and who were quick to see its advantages. It is evident therefore, that, though not new, the plan has the more desirable quality of proved value.

Of all the distinctive features of this house the most striking are the roof doors. Each door covers an opening two feet wide and ten feet long. When all are thrown open, a full third of the south roof is opened, admitting a veritable flood of sunshine and fresh air. The critical stage in the development of each season's pig crop occurs at and immediately after farrowing time. For the best growth it is well known that this time should come as early in the season as practicable.

It is equally well known that spring and fall weather is treacherous, and that chilly, cloudy days and long stretches of gloomy weather constitute one of the chief sources of danger threatening the young pigs. When a sunny day does come, the careful herdsman desires, more than anything else, to get all the sunshine possible into the pens to purify, warm, and invigorate. It was the baffled feeling that came at such times as this, while using a solid-roofed house, that suggested to Mr. Jeffrey the idea of the roof doors. He often wished that he might open up the whole roof and let the health-giving sunshine pour in.

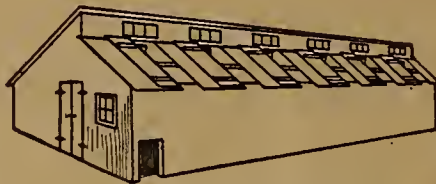
And then the idea came. Though he could not do that, he could at least place large doors in the roof, and these would serve the purpose in less but sufficient degree.

Consequently a house embodying this idea was built in the early spring of 1893. It was placed on a slightly easterly slope, its long way east and west, and in the south roof the big roof doors were made. That spring and through many succeeding seasons the wisdom of the plan was demonstrated. Never were pigs so free from scours and thumps. Every bright day the roof doors were thrown open and the pens were purified and ventilated. The little pigs frisked or basked in the sunny places, getting the exercise so essential to their welfare.

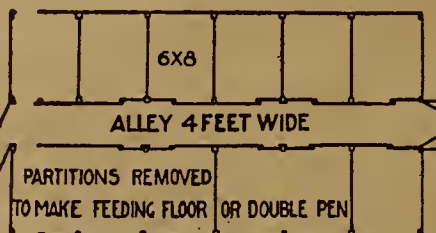
Even an hour of sunshine will put new life into the little fellows. In a long cloudy spell there are often brief glimpses of the sun, and it is then that the roof doors may be flopped open while the sunshine lasts, and closed if the clouds return.

The south wall of the house extends just five feet above the floor. There are two rows of pens extending lengthwise of the building, the north and south dimension of each pen being eight feet. These are separated by a center alley four feet wide. At latitude 41°, where this building is situated, the March sunshine admitted through the ten-foot roof doors covers about twelve feet of floor space, extending across the alley and about to the center of the pens on each side.

Other original features are indicated in the ground plan. The alley is four



Sun-trap hog house with roof doors thrown open



Ground plan of same house

feet wide—which is wide enough. The pens are six by eight feet. The permanent partitions flanking the alley are thirty inches high, and solid. Solid partitions of the same height are placed between the pens, and these are removable.

This house may be reduced or enlarged to suit the demands of any herd. Being made in six-foot units, all of which are identical in detail, it may be made in any length which is a multiple of six feet.

There is nothing about this hog house for show: no unnecessary material, no elaborate details of construction. The frame is all of 2x4 material, and it has withstood Iowa wind and weather for twenty-two years. It was built before the days of concrete floors, with two-inch planks on hewn beams, which, after all, made an excellent floor, strong and dry. It was quickly laid, required no under drainage and was economical and durable. This entire house was built with ordinary farm help, and the same thing can be done on any farm.

Inbreeding is Dangerous

AS TO inbreeding, the following is a good rule. The man who is a skilled breeder, and wishes to fix a type, may inbreed with perfect safety, because he will do it correctly. The ordinary farmer who is tempted to inbreed to avoid the trouble and expense of getting a new male animal or bird had better take counsel of prudence and avoid the practice.

Silage Helps Sick Cattle

FOOT-AND-MOUTH disease seems to be much more fatal in regions in which the stock subsists on dry hard feed, than where the diseased animals may be fed silage, roots, and other soft feeds. More than 30 of the 900 infected cattle died at Glendive, Montana, during the first ten days of the disease last November. In sheep and hogs the disease was more fatal than in cattle.

Long-Distance Winner

A LITTLE Missouri Jersey cow deserves to have her statue placed high on the pinnacle of cow fame.

This cow has now been steadily working at her job of giving milk for fifteen years in the Missouri Agricultural College herd. During this time she has produced over 54 tons of milk—an average of 7,264 pounds each year—which contained 5,000 pounds butterfat, or 290

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"My husband was so delighted with the benefits I received that he has been recommending Grape-Nuts to his customers and has built up a very large trade on the food. He sells it to many of the leading physicians of the county, who recommend Grape-Nuts very generally. There is some satisfaction in using a really scientifically prepared food." "There's a Reason."

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RED COMB

pounds butter for each of the fifteen years.

This little cow, during this period, has given birth to twelve calves which have sold for \$2,400. Her last calf sold for \$300. Estimating the value of her butter at 25 cents per pound, her annual income from calves and butter has averaged \$300 each year. Her feed bill has averaged not far from \$50 a year.

How Much Silage to Feed

WHEN cattle are fed on silage with no other roughage, 30 pounds of the ration to each thousand pounds of animal is about the right amount a day, whether the herd is kept for beef or milk. This assumes that grain will be fed to balance the ration. Horses may be properly fed 20 pounds a day for each thousand pounds of horse. When cattle are fed on both silage and pasture, 15 pounds a day of silage to a thousand pounds of animal is a good ration. Sheep will safely take care of two pounds of silage a day for each member of the flock.

Safe Silage Rations

SILAGE is an excellent feed when given with judgment, but in some cases too much is fed and the stock bloats. The table below gives the average quantity of silage per day that can be safely fed to different animals. It has the approval of P. G. Holden, the corn expert.

Dairy cows	35 to 40 lb
Beef cattle	25 to 40
Young stock cattle	10 to 20
Horses and mules	10 to 15
Sheep	5 to 8
Stock hogs	4 to 6
Chickens	All they will eat

The amount of other feed given should naturally be taken into account. Usually it is safer to feed less silage than here listed, rather than more.

Does it pay to pasture cows? A New York man has made money by the soiling system, keeping his cows up, and growing the forage to be fed to them—green in summer and silage in winter.

AT THE Colorado Agricultural College a simple system of marking individual animals is used which is recommended for small herds or flocks of pure-breds in which it is desired that a system of flock numbers be kept aside from the registry numbers.

Some Barley Facts

BARLEY HAY fed with alfalfa makes a balanced ration.

Barley is accused of causing abortion in cows to which it is fed, but this is a slander on a splendid grain.

Those fine horsemen, the Arabs, feed it to their horses as a concentrate. It is rich in carbohydrates but deficient in protein.

Swine growers who have tried it claim that it is the best single grain feed for hogs in a dry lot.

At both the Utah and California Experiment stations it is fed with alfalfa to balance the ration.

In Southern climates it is sown in the fall and grows all winter, making fine pasture. Take the stock off it in time and it will still make a good crop of barley hay if cut when in the milk.

It makes a fine crop for hogging off if the beardless varieties are sown—and it comes earlier than almost any other grain crop for this purpose.

Winter barley is a coming grain. In Michigan, winter varieties have been developed which are hardly all over the southern peninsula—but they are bearded. Otherwise they would be ideal for hogging off in early summer.

These winter varieties yield better than the spring varieties.

"Tilly Alcartra," the world's-record dairy cow, was fed 1,828 pounds of barley when she was winning the championship. She ate as much oats as barley, 1,282 pounds of bran, and 1,280 pounds of linseed meal.

The grand champion Pacific Coast steer, "Thick Set Boy," lived his first year on equal parts of rolled oats and rolled barley with a little bran. The principal change after the first year consisted in adding molasses. He weighed 825 pounds as a calf, 1,400 as a yearling, and 1,750 as a two-year-old, and dressed 71.8 per cent.

Tests made in feeding brood sows with barley show that it is increased in value ten per cent by grinding or rolling.

We are gradually learning that variety is very important in feeding. While barley contains much the same feeding elements as corn, it gives variety, and may well be studied as giving variety even by the corn-belt farmer.

It carries a little more protein than corn—12 per cent as against 10 per cent; and a little less of the carbohydrates—68 per cent as against 70 per cent.



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It will tone them up—it will get them laying quicker. Pan-a-ce-a has an invigorating effect on the inactive egg organs. It's easy to feed—put a little in the morning mash as directed. The cost is trifling—1c worth daily is enough for 30 fowl. You can't lose—no eggs, no pay—as witness this guarantee. So sure am I that

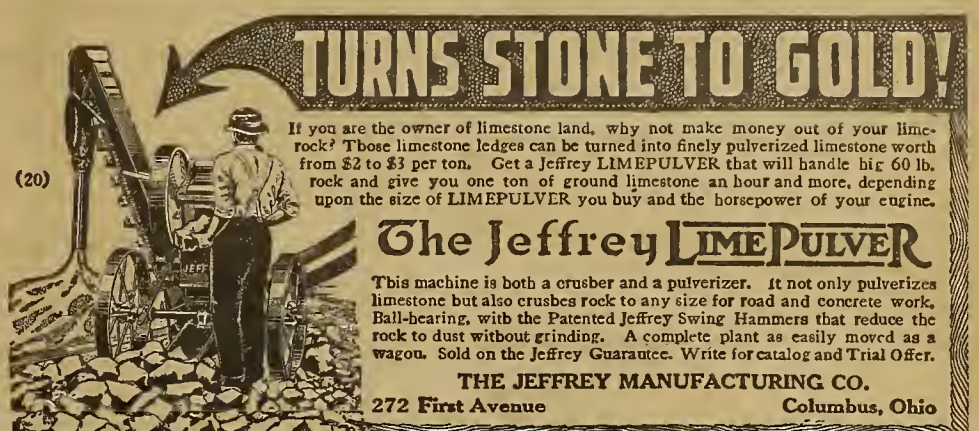
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You can have 30 days FREE trial and see for yourself how easily one of these splendid machines will earn its own cost and more before you pay. Try it alongside of any separator you wish. Keep it if pleased. If not you can return it at our expense and we will refund your \$2 deposit and pay the freight charges both ways. You won't be out one penny. You take no risk. Postal brings Free Catalog Folder and direct from factory offer. Buy from the manufacturers and save half. Write TODAY.
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lasts longer and protects better than any other kind of paint.

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Farm Notes

My Exposition Trip

By Fred Grundy

WHEN a fellow's hungry he will get something to eat if it can be found and he has the price. After attending the San Francisco Exposition for about seven hours one day my stomach reminded me that I needed food. I told the waiter in a near-by restaurant to bring me two boiled eggs, a ham sandwich, one sixth of an apple pie, and a cup of coffee. After eating I was handed a slip of paper. The cashier said, "One thirty, please."

My bill was right: \$1.50 per dozen for eggs, \$1.20 per pie, about \$10 a pound for ham.

Outside I asked a guard what light refreshments usually cost. He said from \$1 to \$3.50, according to what one ate and the "concession" he ate it in. Then he said, "When you come here you should bring your lunch along." It was good advice.

As I am interested in poultry I bought a daily to see how prices for eggs and other produce ran. The price paid the rancher for eggs was 18 to 22 cents a dozen.

As I could obtain very little information concerning poultry at the exposition, I decided to go to the rancher and back-yard poultryman direct and see what they were doing and if prosperity was smiling on them. I soon got in touch with quite a lot of them, and they were delighted to meet me and asked all sorts of questions. I found poultry conditions on the Pacific Coast quite similar to what they are farther east so far as management is concerned. Through lack of the simplest precautions they lose by storms and chilly weather about one third of all the chicks they hatch. Thousands are poisoned by moldy food, and mites and disease kill thousands more.

Prosperity Everywhere

Here and there I found a man or woman hatching and raising chickens with scarcely a thought of loss. Their breeding stock was healthy and strong; the chicks hatched strong, were provided with accommodations designed for comfort and health and supplied with an abundance of suitable food, and naturally they grew without a check and brought a good profit when sold.

Despite the war and the absence of the great exhibits from the scrapping nations, the San Francisco and San Diego expositions were to me very interesting. Both these expositions are practically one, divided.

Aside from the exhibits of Japan, it is chiefly a great exhibition of North, Central, and South American productions. San Francisco and San Diego are about as nearly alike as black and white, and it was a very happy thought of the promoters of the exposition to divide it and compel people to visit both to get the full benefit and thus see more of what they call the most wonderful State in the Union.

Japan never fails to take the fullest advantage of a good opportunity to advertise—and sell—Japanese productions. Australia is also on hand with a fair showing, considering the difficulties under which her exhibition was made. Hawaii is doing everything possible to advertise her products, especially her fruits.

But when it comes to real brilliant advertising our Canadian neighbors take both the cake and the platter. Their exhibits of Canadian products and scenery are astonishing. A people that can get up an exhibit like that surely are alive and have a magnificent country to draw upon.

Commercial Interests Lead

In all lines at the exposition commercial interests lead. The men who buy and sell are at the front in all things. Compared to the manufacturer, the carrier, and the dealer, agriculture cuts but a small figure at this exposition. The working man gets much more attention and consideration than the tiller of the soil.

The working man claims the right to quit work any minute that conditions do not suit him, no matter who may suffer in consequence. He is constantly striving for a shorter workday and higher wages, and the daily press is almost

unanimous in supporting him in his demands. But the farmer must continue to trudge away and produce all the food the weather will let him. If he were to strike for better pay for what he produces, so that he might have a shorter workday, there would be a howl from all other interests that would be deafening.

The exhibits in the Palace of Agriculture are not extensive, but they show clearly that strong scientific men are doing effective work for the farmer, and though progress is necessarily slow, owing to the length of time required for experiments and proving them, scientific agriculture is forging steadily ahead.

As to mushrooms and toadstools: There is no general test by which the poisonous can be told from the edible. If one doesn't know, the test is to eat the fungus. If you live it is a mushroom. If you die it is a toadstool.

Brakes Applied Suddenly

THE picture shows what happens when brakes are applied too suddenly. Small particles of rubber are ground off the tire, and if the machine is heavy and is traveling fast when the brakes are applied, sometimes even the



fabric may be broken. A gradual application of the brake will avoid tire abuse of this kind.

To a less extent, the same damage is done when the clutch is let in too quickly when starting.

Lost People

JOHN S. PHIPPS, last heard from in Minnesota in early part of winter of 1902-03, now twenty-eight years old. His father lives in Colorado and would be glad to hear from him, or from any person knowing his whereabouts, if living, and particulars of death, if dead.

TILMAN HOGGAN, age about twenty-nine years, height 5 feet 6 inches, weight about 140 pounds, dark hair and eyes and dark-complexioned, is a lost person. He was last heard from at Parson, Alabama, where he was a coal miner. Information concerning him will be deeply appreciated by a friend in Georgia. Write to FARM AND FIRESIDE.

Interesting Books

PRACTICAL IRRIGATION BY PUMPING is a 40-page book showing largely through pictures of prominent irrigation projects the best ways of watering arid land. It contains tables showing the proper sizes of pumps and pipes to be used on farms of various sizes. Published by Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Illinois. It will be sent free on request to those interested.

Flower-growing has been somewhat neglected by the book writers in the past. The raising of flowers has now grown to be a great commercial industry as well as a delightful recreational occupation. In view of this, the exhaustive treatment of flower-growing by Edward A. White in his book THE PRINCIPLES OF FLORICULTURE is timely and important. 450 pages well illustrated. Macmillan Company, New York City. Price, \$1.75.

The beginner in the study and practice of agriculture, and many practical farmers as well, want a farmers' general agricultural handbook in which they can easily find a brief discussion of the more fundamental matters pertaining to farming and farm animals. Such a book is THE ESSENTIALS OF AGRICULTURE, by H. J. Waters, 456 pages, fully illustrated. Ginn & Co., Chicago. Price, \$1.25.

HOW FARMERS CO-OPERATE AND DOUBLE PROFITS. This most valuable book by Clarence Poe, editor of the "Progressive Farmer," is a call for leadership in working out farm problems. It begins by asking the question of every reader, Why not be a leader in the new and good work in your neighborhood? It is not the work of a visionary man, but of a man with vision. It is written out of full knowledge of what has been done in the way of successful co-operation in this country, and thus answers the objection so often made, "This may work in Europe but won't work in America." At the same time the author out of his investigations of the successful co-operative plans of European countries is able to illuminate his pages with light from other lands. In these times when the gospel of co-operation is believed in by most farmers, but when at the same time so many of us are doubtful of our ability to make a success of it locally, this book should be widely read. It is a volume which might well be made a part of the course of reading of every farmers' club or other organization. Published by the Orange-Judd Company, New York. Price, \$1.50 net.



Your Questions

Why Ham Molds

Query: Can anyone give me directions for keeping ham from molding?
Mrs. B. D., Washington.

Answer: The ham molds by reason of too much dampness. This dampness may come from one or both of two reasons. Perhaps the ham was not sufficiently dried by smoking. Perhaps it was kept in a place where the air is damp. A dry cool cellar or attic where there is a free circulation of air is a good place to hang smoked meat. When thoroughly cured by smoking they may be covered for perfect security with waxed paper, and over that a burlap or canvas wrapping, sewed securely in place. The storage-room should have dry air with good ventilation, and flies should be carefully excluded.

Disease May be Fatal

Query: A disease has lately appeared, first in my younger chickens and later among the old ones. Warts form on or near the eyelids, sometimes completely closing them. These bunches are hard and seem painful, are whitish in color and not very large. I don't let my chickens run in the wet grass, and they have good quarters. They are fed mixed ground or cracked corn, cracklings two or three times a week, and table scraps. I do not overfeed. They get the cut-up grass, cabbage leaves and other vegetable matter.

Mrs. E. C. A., West Virginia.

Answer: These fowls seem to have a disease called "sorehead." It is considered to be closely related to chicken pox and roup. The roup form causes more deaths than "sorehead," but the latter sometimes develops into a fatal form.

Separate all the birds which are perfectly well from the others. Clean the poultry house and quarters carefully, and spray over the entire surface a disinfectant composed of one part of corrosive sublimate to 1,000 parts of water, or two parts of creolin in 100 parts of water.

Remove the warty-looking scabs from the chickens' heads and apply the creolin solution directly to all the diseased spots. If the creolin is not obtainable, use peroxide of hydrogen. Put enough permanganate of potash crystals in the drinking water to color it pink. Let the birds drink this water for several days. In cases of roup, dip the birds' heads in a strong solution of permanganate of potash several times a day, until the birds are better. Hold their heads in the solution until they begin to choke slightly.

NOTE: This answer will reach our readers late, even though we are printing it soon after getting the query. We answered Mrs. E. C. A. by mail so that she might have the information as early as possible. All questions sent us are answered in this way.—EDITORS.

Catch the Weasel

Query: How can I trap and destroy a weasel which is bothering my poultry?
JOHN M. B., Washington.

Answer: Use a clean, freshly smoked steel trap covered with some light dry material like chaff or hulls or grain seed. Set the trap where the weasel is in the habit of coming and bait with a chicken's head or other meat. Put the bait over the trap where the weasel will have to jump for it. The trappers' rule is to "put the trap where the animal's foot will have to go." Live poultry will be more attractive to the weasel than bait, therefore shut the birds all up, so that it will be bait or nothing for the criminal.

Kansas Gives Free Fair

[CONTINUED FROM PAGE 3]

chapters of granges and the farmers' unions and many entries in the agricultural exhibits. The exhibits included grains, grasses, vegetables, and fruits.

Plowing demonstrations were given by tractor manufacturers every morning on a farm near Topeka. Many tractors were exhibited. At the fair grounds ten acres of machinery—every exhibit plot was taken—broke all records in that department.

More than 5,000 exhibits of fancy-work were entered in the textile department. The work represented the time of

half a dozen women for an ordinary lifetime. One of the most admired pieces was a tatted bedspread that required ten months' work to complete. It was valued at \$300. The youngest exhibitor in the textile department was Miss Mary Stonebeck, a five-year-old Topeka girl. Miss Stonebeck made and showed an embroidered doll-buggy pillow. The oldest exhibitor was a woman ninety-one years old.

"Topeka couldn't help but win with a free fair," said J. J. Achenbach of Washington County, Kansas, a stock farmer, who showed a herd of cattle at the fair. "Not only that, but the idea will grow—this fair is the beginning of the free fairs which will be the rule all through the country in a few years. The idea has worked out in good shape with some county fairs. We have been successful with our local county fair for the last five years, and in all that time there has been no admission charge. Of course it is true that our fair is on a small scale when compared with the big state fairs, but it is also true that the theory is fundamentally correct. It will work out on a big scale."

Ten persons were injured when the 200-horsepower racing car Ajax crashed through the fence on a turn. No one was injured fatally. The accident was caused by the front axle of the machine breaking.

"Check your baby—free." This was the sign in front of two tents maintained in the fair grounds by the Topeka Public Health Nursing Association for the care of small children. Muslin checks bearing numbers were pinned on the baby's dress in the order the children were left. Duplicate checks were given to the parents.

One of the tents was used for babies less than a year old. The other tent was used for babies more than a year old, and for children under five years of age.

The youngest baby checked was seven weeks old. When all of the children started to cry at once,—which they did several times,—the nurses were very busy.

An emergency hospital was maintained by Kilmaurs King and Miss Kate King to give medical attention to persons injured. They were not busy except when the motor racing car crashed through the fence. The women's rest-room was well filled all during the fair.

The rainy weather experienced during a part of the fair was traced to Charley, the 4,180-pound pure-bred Shorthorn steer which was exhibited. Charley has been shown at seven state fairs and drew rain at every one.

If there is anything in the theory that the big steer draws rain on account of his size, he is certainly a strong magnet. From the tip of his shoulder to the ground he measures 6 feet 3 inches, and he is 14 feet 7 inches long without counting his tail. He is 15 feet 1 inch in circumference around the smallest part of his body.

Charley was born and reared on the farm of Charles Ainsworth of Eureka, Kansas, five years ago. When two years old he weighed 1,900 pounds, and was sold to Harry Hoover, the present owner, for 10 cents a pound. Now he weighs more than two tons, and he is not fat.

"Milwaukee Slim," the tallest farmer in the country, attended the free fair. Slim is 7 feet 4 inches tall. O. G. Krause is his real name, and he lives in Ottawa, Kansas. He was born and reared on a Franklin County, Kansas, farm. His parents were persons of average height. Slim has a sister that is 6 feet 2 inches tall. He had another sister, who died several years ago, that was 4 feet 8 inches tall.

Slim has been the tallest man in America since the death of his partner, Louis Wilkins of Osawatimie, Kansas, another farmer boy, who was 7 feet 9 inches tall. Since the death of Gus Shields of Texas, who was 7 feet 9 inches tall, there is only one man in the country that rivals Slim. He is George Robertson of Humboldt, Iowa.

"My father raised lots of cane and made lots of sorghum," Slim said in explaining his height, "and I have always eaten lots of sorghum molasses."

Slim measured 6 feet 2 inches when he was fifteen years old—and all because he followed the plan of the sugar cane, he believes.

"Cane grows tall," continued Slim, "and I did the same by keeping myself full of the same thing that causes the cane to grow."

It was a pity that the small boys and girls who cry for cookies between meals were not the judges in the culinary department. The skill in cookery of Kansas women was shown in the 500 different articles of food exhibited.

The judging was done by score-cards, one card for every kind of food, and the awards were made by number, which eliminated any possibility of discrimination.

The judges in the culinary department judged the textiles.

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The afternoon of the same day George Simmons himself came into my office

The Rise of George Simmons

By CHARLES H. LERRIGO, M. D.

Chapter I—Blazing the Love Trail

ONE thing I always liked about John Gandy was his confiding way of bringing me all of his problems.

He came in one day in great perplexity. His cousin Alice was visiting them, and had been offered the district school. She had recently lost her parents and was free to accept the offer, but John, who was her adviser and in a certain sense her guardian, although she was of legal age, had observed a most scandalous and disturbing thing: the oldest Simmons boy, son of the most thriftless family in the neighborhood, had ventured to cast glances in her direction, and she had offered no very vigorous objection.

Under these circumstances, were he and his wife justified in urging her to remain, much as they longed to do so?

I did not offer John a heart sympathy. I had observed some very good points about young George Simmons while giving—I feared it was a case of "giving," though I hoped for the best—my services to the children of the family in a recent diphtheria attack.

"What shall we do?" asked John.

"Let Nature take her course," I advised.

For once I had good reason to doubt the probability of John's accepting my prescription.

The afternoon of the same day George Simmons himself came into my office.

"What's wrong, George?" I asked.

His reply certainly did give me a turn. He had come to see if he could commence paying their bill! I knew this for a sign of genuine reform.

One month later he came again, and in an embarrassed way offered me a five-dollar bill. Instead of leaving he continued to sit in my best chair, twirling his hat fiercely, and making savage though unconscious attempts to penetrate my linoleum with his heel.

"Doctor," he blurted out, "why aren't we folks as good as Gandy's people?"

I dodged.

"Who said you weren't, George?"

"Never mind who said it. You know what I mean. I want that we shall be their kind. It's very important. I want you to help us make it."

Such an appeal was not to be resisted. So far as in me lay I should help him.

The one great obstacle to the building up of the Simmons family was the foundation upon which it was reared—old man Simmons. There was good in Simmons, no doubt, but it was always adulterated, generally with a more or less fiery potion from a neighboring State; for, be it known, Kansas is a prohibition State that really prohibits.

But the problem of Simmons was settled for us.

George came in to my office one day to say that he believed maybe I'd better come out and take a look at "paw."

I found the old man in the late stages of typhoid fever, and in the case of a liquor-logged man of the Simmons stamp it was hopeless.

"Ain't he goin' to git well, Doc?" asked Mrs. Simmons, who was bending anxiously over the patient.

"I can't give you much hope, Mrs. Simmons," I replied softly.

"I ain't lettin' anybody in but me, Doc," she explained. "I don't want none of the children to catch it."

"It isn't a hard matter," I reassured her, "to prevent typhoid from spreading through a family if one can be sure that all drinking water is boiled, all food thoroughly cooked, and that everything coming out of the sick-room is either burned up or disinfected. You must be

especially careful to wash your hands after waiting on the patient, and to see that all spoons, glasses, and dishes used in the sick-room are boiled before getting back into general use. More important than any other one thing is to screen your windows and doors so as to prevent the flies from coming in and going out. Well, I'll write down my directions and drop in again to-morrow."

Mrs. Simmons deserted her patient for a moment to see my car start.

"I ain't ever seen one of 'em real close," she apologized. "They certainly is powerful insterments."

"Some day when we get all through with this trouble I'll take you for a ride," I promised.

"Some day, Mother, I'll take you for a ride in mine," called out young George, who suddenly appeared beside us. The way he said it gave me a strong idea that he meant to be a successful man.

Just at that moment I saw a big splash of water come whirling through an unscreened window. A second later and the voice of Ella, the eighteen-year-old daughter, rose in emphatic protest.

"Now that's the last time you throw slops out of the window, Jennie. I told you yesterday Doctor wants all that kind of thing stopped. It ain't decent, anyhow. Oh, my, if that ain't the doctor himself!"

Jennie ran out in mutinous disarray.

"Doctor," she cried, "you don't mind us throwing just dishwater out of the window, do you?"

"You wouldn't throw it down the well, would you?" I answered.

"No, I wouldn't throw it down the well; but that's different."

"Not so very, the way your well lies. It's handy to the kitchen, like most wells, and the soil slopes down to it. You throw out one lot of dishwater and then another lot and then another. Pretty soon all the ground around is just soaked up with grease and refuse matter, not to say anything about germs. Then comes a good heavy rain and washes the ground, and where does it empty itself? Into the well."

"But it won't be able to do it no more, Doctor. George, he's going to make a top for our well."

"That'll keep rabbits and cats out, but these little rascals of germs, Jennie, they get down where you don't expect 'em. The little streams of water sink down beneath the top of the soil and run along underneath and into the well that way, and the germs go with 'em. I suppose you are boiling all your water now before drinking it?"

"Ever since you said so, Doctor. We ain't wanting any more of us to get typhoid."

"You won't if you are careful," I said, getting into my car. "And I know you are going to be."

I MET John a little farther down the road. He was not in the least sympathetic when I told him that Mr. Simmons had typhoid fever. In fact, he was very indignant. John had been feeling his fodder quite comprehensively since his election to the office of township trustee.

"Typhoid fever," he announced, "is a filth disease; and here is this Simmons family exposing an otherwise clean community to a most loathsome and contagious disease because of their dirt."

"But let me venture to suggest," I objected mildly, "that all the dirt in the world will never start a case of typhoid fever unless the typhoid germ in some way receives an introduction to it. Now John, tell me where they got this germ. I know of no typhoid cases in this neighborhood."

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"That's just what I said," shouted John triumphantly. "there was no typhoid in the neighborhood till they brought it. They're a dirty family. Dust in the house, mud on the floors, chicken tracks all around, fly specks on the windows wherever the glass will stand for a fly speck."

"I surrender, John. The minute you mention fly specks I have to give in. No one knows how many different kinds of sickness a fly speck may germinate."

"We certainly won't expose ourselves again," John persisted. "Alice was there several days, but that was a month ago. You know she was taken ill there when she was visiting Ella Simmons, and you thought she'd better stay a day or two."

"I remember," said I. "I also remember that I took a drop of her blood for a typhoid test, and took it over to the state bacteriologist. This just reminds me that I've never had a report on it."

"Maybe typhoid was what she had," suggested John. "Do you suppose she could have taken it just staying overnight?"

"When anyone tells you they had a touch of typhoid yesterday but are all right to-day, set 'em down in the ignominious class, John."

"Anti-typhoid vaccination seems to be a wonderful thing, Doctor," he continued. "Here with all this big encampment of soldiers down in Texas the vaccine gave such protection that there were only two cases of typhoid, while during the Spanish-American War, under very similar circumstances and similar length of time, just about one man in every four had typhoid, and ten per cent of the cases died. What do you think of it?"

"I think it's a fine thing during epidemics."

"How about the present epidemic?"

"I should scarcely call one case an epidemic."

"But why shouldn't all persons be vaccinated against typhoid just as against smallpox?"

"The preventive effect of the vaccination does not last very long, and the intelligent citizen can protect himself reasonably well without it. But I'll vaccinate you if you want me to."

"Well, I believe I'll take it, Doctor. It won't hurt, will it?"

"Not enough to speak of. You get it in three separate doses, about ten days apart. There is a little ill feeling and discomfort for twenty-four to thirty-six hours, and it's best not to get out in the hot sun working hard for that length of time."

"Well, I had all my hogs vaccinated this spring and there wasn't a bit of cholera in the neighborhood. I believe I'm as important as a hog, and I've got more nerve. They squealed like sixty, but I'll bet you don't get a squeal out of me."

OLD man Simmons put up a better fight than I anticipated. He might even have pulled through had it not been for the offices of a volunteer neighbor.

He came out of his stupor enough one day to declare that his system craved apples, and apples he must have. I like apples myself, but I do not recommend them as typhoid diet at the most dangerous stage. I suggested that Mrs. Simmons might stew some and satisfy him with the juice.

When she gave it to him several hours later he announced cheerfully:

"I'm a-goin' to get well now. He's fixed me. I'm all cured up."

After a little while he dropped off into a stupor. An hour or two later he awoke with violent vomiting.

"Did that meddling neighbor give you apples?" Mrs. Simmons cried.

"He give me two," said Simmons. "And I ate core and peel and everything so the doctor wouldn't know."

They telephoned me at once, but I was away in another direction, and when finally I reached there, some hours afterward, it was all over. Nature's voice had been heeded.

John Gandy was not at the funeral. His wife laughed when I asked for him.

"He still feels the vaccine you injected yesterday," she explained. "We want you and Mrs. Doctor to stop at the house and take dinner with us. Your wife hasn't met Cousin Alice yet, and you aren't real well acquainted with her yourself."

So we took the two young women into our car, leaving Aunt Mary and Uncle to bring the surrey at a more leisurely pace.

We had scarcely started before we saw the tall form of our new minister just cutting off through a pasture. On impulse I shouted to him. He turned to us.

"Where are you going in such a hurry?" I asked.

He came a little nearer to the car.

"It is late and I have a three o'clock engagement at Pleasant Valley church," he replied.

"You aren't intending to walk over there in the blazing sun?" I asked.

"I thought I should," he replied.

"You climb in here with me," I ordered. "We'll get you over to Pleasant Valley in no time. Why don't these people give you a horse?"

"I'm to have one next week," he explained.

Then he proceeded to defend his people from any charge of neglect by a careful explanation, for which I liked him. Moreover, I saw that he was a man of ability.

"How long do you suppose you'll stay preaching to these little country churches?" I asked abruptly.

A doctor is allowed so many liberties that he often asks really impertinent questions with little sense of their impropriety.

"As long as they'll have me," was his cheerful reply.

I was inclined to scoff at these words, but a glance at his high forehead and earnest eyes impressed me with a feeling that I was talking to no common man.

"You'll be different from most young preachers if you stay after you get a call from a town church," I murmured.

"You're behind the times, Doctor," said he. "There are a lot of preachers now who don't hear the still, small voice in every fat call. If we are looking for the fat of the land we can travel to it by a good many more direct routes than the ministry."

"I notice, however, that the country churches still have difficulty in keeping a good man."

"You will see it less and less," he prophesied, "as the years go by."

"What do you think of George Simmons?" I asked abruptly. "Maybe you've noticed him when you've run in at the Simmonses since the old man's illness."

"George is a good deal of a man," he answered. "He's awfully good to his mother and sisters." Then lowering his voice he ended simply, "He is one of the young men whom I have already marked for Jesus Christ."

I dropped the preacher at his church in ample time for his service.

"My wife will be here next week," he said in farewell. "I hope you will all come to see us then."

"It's a good thing he has a wife," remarked Mrs. Gandy as we started away.

JOHN was able to be at the dinner table, and he listened with interest to our comments on the new preacher.

"He said several things that seemed to anticipate great things of young George Simmons," said Uncle innocently.

I was looking at Alice as he spoke, and was quite embarrassed by the conscious look which came into her eyes and the blush that rose to her cheek.

John saw them too.

"I think," said he with deliberate malice, "that the best thing the rest of the Simmons family could do would be to follow the old man."

"Why, John Gandy," exclaimed his wife, "that's the meanest thing I ever heard you say!"

"Any family," he pursued, "that will introduce into a quiet, decent neighborhood a filth disease such as typhoid owes it to the community to disappear."

Suddenly Alice spoke.

"How do you know they introduced this filth disease into this quiet, decent neighborhood, John?" she asked.

"I have Doctor here as evidence. He says Simmons died of typhoid."

"But perhaps the doctor's typhoid patients don't all of them die," she suggested in a tone that made me wonder what I had done. "Perhaps some of them get well. You remember when I was at Simmons that day and was taken ill and you kept me there two days because I had fever, Doctor? What was the cause of my fever?"

"Your fever, Miss Alice," I parried, "was caused by a rise of temperature."

"Indeed!" she sneered. "You perhaps remember that you pricked my ear to get some blood. What was that for?"

"I wanted something of your very own to remember you by," I replied.

The folks laughed, and Uncle remarked: "A smart answer turneth away inquiry."

"Not always," insisted Alice. "You said you would send that in for a blood examination. What report did you get?"

"The fact is, my dear young lady, that I got no report at all. You were yourself again the next day, so I allowed the matter to escape my attention."

Having finished his dinner, John got up with an antagonistic glare.

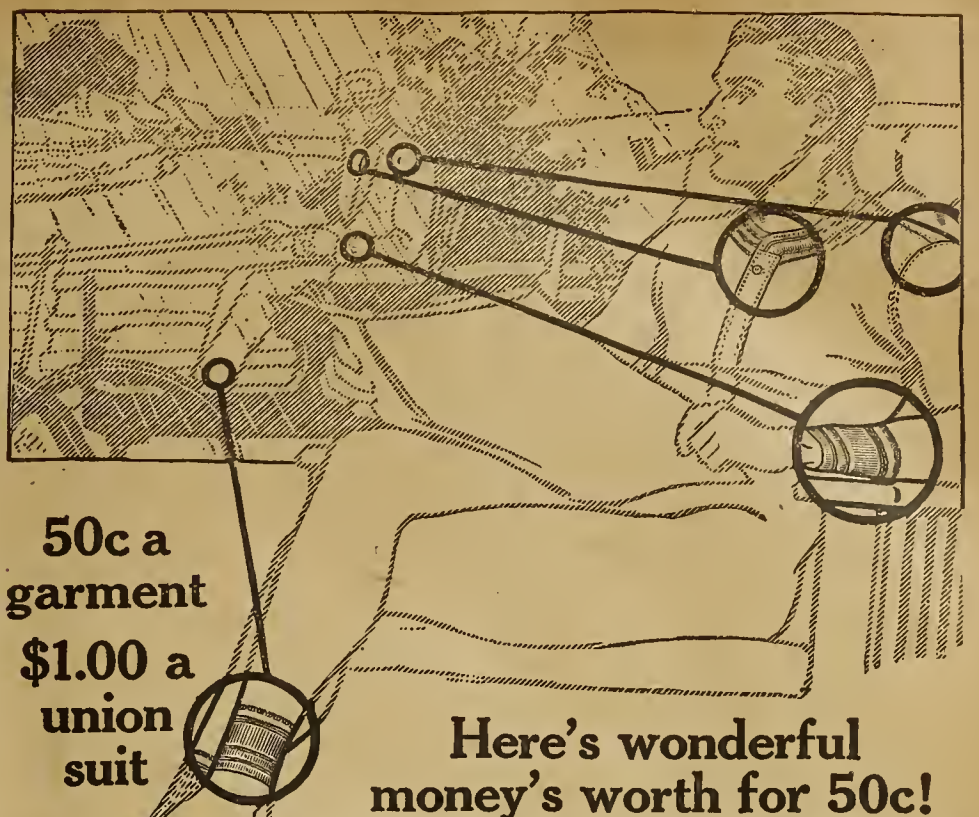
"The Simmons people brought typhoid here," he almost shouted. "They are undesirable citizens, and I'm going to let them see it."

The increasing violence of John's temper and the increasing dampness in Alice's eyes rather alarmed me, and I left hastily after that turbulent dinner.

Strange to say, a report from Alice's drop of blood came over the telephone that afternoon.

The bacteriologist was full of apologies for the delay, particularly as the diagnosis was typhoid fever!

[TO BE CONTINUED]



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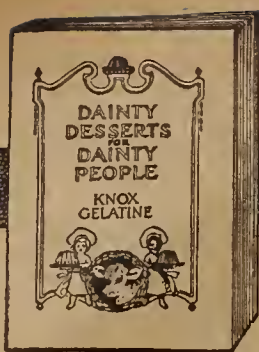
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A Pick-up Salad—One large red-skinned apple, one Bermuda or mild-flavored onion, a few leaves of lettuce, mayonnaise, English walnut meats, or lemon jelly.

Slice the apple across, so that the slices will be round and as thin as possible. Remove the core from the center with a tube. Slice the onion also in thin rounds. If there are no large sweet onions, smaller ones may be used instead by mincing them very fine. Place a round of apple on a lettuce leaf or an individual plate; cover with mayonnaise. Over this place a slice of onion; cover this with mayonnaise and finely shredded lettuce. Repeat the layers if desired and finish with an English walnut meat or a cube of lemon or pepper jelly. Garnish with the jelly cubes. A. W. O., Ohio.

Hot Gingerbread with Apple Sauce—This is such a good combination, and makes quite a substantial dessert, so that it may be served after a picked-up meal. There is apple sauce and apple sauce, and it very often falls far short of



Gingerbread best when served warm

what it should be. Wash the apples, and cut them up, peel, seeds and all; put into a deep pan with a very little water, and cook gently till they are tender. Press through a sieve, add a little salt, sugar to taste, a little butter and nutmeg or cinnamon. Most people like it served with cream. For an easy and economical gingerbread mix one cupful of molasses, one tablespoonful of lard or butter, a little salt and spices to taste; add flour to make it so stiff you can hardly stir. Put one teaspoonful of soda in a cup, fill with boiling water, and add, little by little, to the dough. Bake at once, and serve warm. H. K., Iowa.

Making Salt-Rising Bread—When setting the yeast the day before baking, add one Irish potato thinly peeled and cut into small pieces. Stir these pieces of raw potato through the yeast, set in a warm place overnight, and in the morning the yeast will be very light. Take out the pieces of potato and throw them away. SARA E. BRANDIS, Ohio.

Recipe for Salt-Rising Bread—Yeast—Take one cupful of sweet milk in a quart cup. Place cup upon stove until milk boils well. Stir into the boiling-hot milk five or six teaspoonfuls of white corn meal to which a pinch of soda has been added. Wrap up well, and set in a warm place overnight, or until it is light.

Sponge—Pour one and one-fourth cupfuls of water, as hot as the hand can bear, in a bowl and add about two cupfuls of flour. Then add the yeast from the quart cup, and stir with a spoon until mixed. Place the bowl in a warm place until the sponge rises well, about one to one and one-half hours. A good way to keep the sponge warm is to place the bowl in warm water. The water should be at a body temperature or warmer.

Dough—Take one and one-fourth cupfuls of hot water (almost boiling), and dissolve in it four teaspoonfuls of sugar, one teaspoonful of salt, two teaspoonfuls of lard, and add six or seven cupfuls of flour. Then add the sponge, and mix well. Add more flour if necessary to make a rather soft dough. Mold the bread into loaves at once. Put in a warm place to rise one to one and one-half hours, and then bake in the usual way.

Salt-rising bread is close-grained, and it should not be made as light as other bread. H. A. K.

New Use for Peroxide—The next time you scorch anything while ironing, saturate scorched place with peroxide and press with a tested iron. Unless the scorch is very bad it will immediately disappear. Repeated dippings and pressings will take out very dark brown spots. I. O. W., Kansas.

Cooking Meat for Invalids—Overheated beef juice or beef tea is like the leathery white of egg. They should be heated over water. The most appetizing way of serving raw beef is in sandwiches. Use bread at least a day old, cut it in even slices and remove the crust. Scrape the raw meat and spread on the bread like

butter. Put the sandwich together and place in a hot oven long enough to brown the bread but not cook the meat, which will be a pale pink. Spread a very little butter on the toast and serve at once.

To Cook Old Beets—Instead of boiling winter beets, place them in a pan and bake them in the oven. Use an old pan, as no water is added and the dry heat is rather hard on the pan. The beets lose none of their color and the flavor is fine. K. M., P., Ohio.

Pepper Jelly—For this new appetizer one must possess pepper vinegar, which is made by removing the seeds from two or more ounces of capsicum pods and placing them in a quart bottle of white wine vinegar. Several weeks are required to bring it to its full pungency, but it keeps indefinitely if well corked, and is a delightful accompaniment to cold meats, cold cabbage, and things which require a sharp, tart condiment.

One cupful of pepper vinegar should be colored with leaf green. To this add one rounding teaspoonful of gelatin which has been soaked a few moments in a little of the pepper vinegar. Place over a teakettle until the gelatin is dissolved, and add to the colored vinegar. Place in mold on ice until firm. Will improve by standing and keep for several days. Is fine with cold salt pork which has been rolled and tied, boiled and placed in a press until cold and sliced

in very thin pink and white round slices, and garnished with parsley and decorated with cubes of the green jelly. Or the white tips of celery may be used for a garnish, which makes a dainty and pleasing contrast to the jelly.

ANNA KOONZ, Nebraska.

Apricot Syrup—Cooked apricots may be run through the meat grinder and then made into a syrup with sugar. This may be used as the foundation for a gelatin dessert or an ice, or it may be served in place of maple syrup with griddle cakes. J. M. B., Wisconsin.

Five Spoonful Salad Dressing—A tablespoonful each of five different things is the first requirement. These are salt, a scant tablespoonful, sugar, butter, mustard, and flour, and are all creamed well together. One egg is beaten, and mixed with the first mixture, after which all is well beaten with the egg beater. Then add a cupful of milk and beat once more, stir in a cupful of fairly strong vinegar, set on the stove, and let boil up well, stirring all the time. After it is cool it should be put into a glass jar and kept well covered until ready to use. When using the dressing add an equal quantity of cream or rich milk. This will be found good for any salad excepting fruit salad.

To Keep Lemons—When you have one or two lemons on hand and cannot use them right away, if you put them in your rice jar and keep them covered they will keep fresh for weeks.

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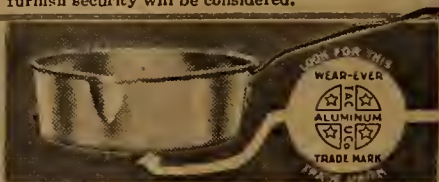
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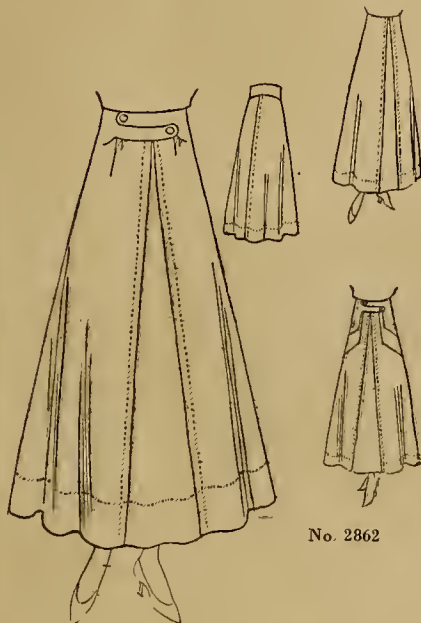
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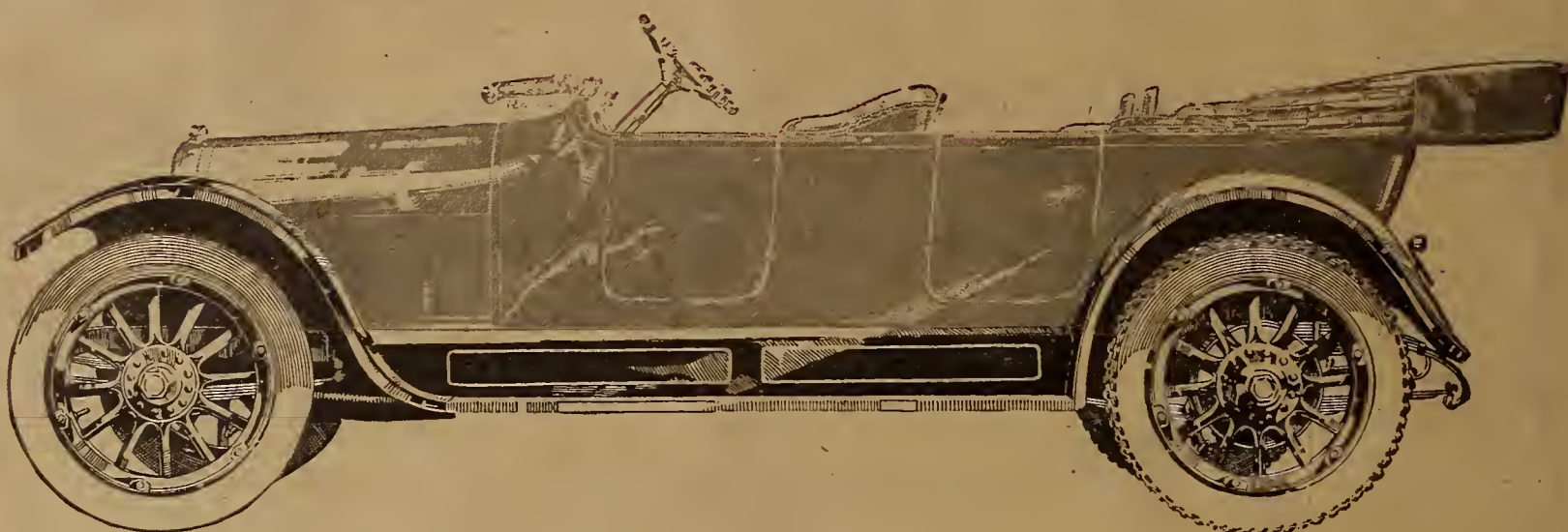
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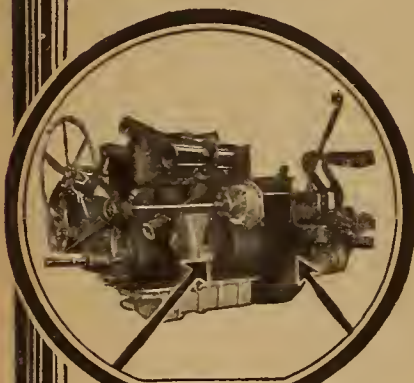
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FARM^{and}FIRESIDE

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From Threshers to Grinders

A Review of Four Machines Used for Slack-Season Work

By D. S. BURCH

YOU'VE seen and probably bought artificial snow, the kind that's put around Christmas trees and in holiday show windows. It is nothing but ordinary mica put through a grinding mill.

The next time you buy a down pillow, see if there aren't some pieces of good-sized quills in it. Lots of "down" is now made by grinding up feathers, including those from wings and tails.

A Southern business man went to a manufacturer of grinding mills and said he wanted one that would grind peanut hulls; they're hard to grind because they are so gritty. He finally got a mill that would do the work, though he wouldn't tell what he was going to do with the ground hulls. But the secret leaked out. They are now used in Pittsburgh for polishing tin plate, and after that the oily mixture is put up in packages with a fancy label and sold as sweeping compound. Those are just a few of the ways up-to-date business men make use of grinding mills.

On farms there is a great variety of uses also, and plenty of opportunity to pick up a few extra dollars now and then. For instance, one man having a feed mill learned that a neighbor was having trouble with his cattle. The cattle were just off pasture and had begun to scour badly when given shelled corn. From inquiry the man with the feed mill learned the cattle were for sale, and he bought them. He had the notion that the sharp corners of the corn had irritated the tender stomach, accustomed only to grass. This seemed to be the reason, for as soon as put on ground corn the cattle stopped scouring, put on flesh, and made a nice profit.

Alfalfa Meal, the Rival of Silage

ONE farmer in the Southwest uses a mill to grind up prickly pears for his cattle. Even such an excellent feed as alfalfa hay is better when ground. In parts of New Mexico alfalfa grows so fast the stems become large and woody. Some of them are as big as your little finger. But when run through a grinding mill and made into meal, the coarse hay becomes a real delicacy for stock. In fact, the alfalfa-meal industry has grown so rapidly in the West that few localities all through California, Washington, and Oregon are without a portable alfalfa mill. Fairly large mills seem to give best results, and these go around about the same as threshing machines in the corn belt, and grind alfalfa hay into a fine meal. About five tons per hour is the usual capacity. This method of handling alfalfa hay overcomes all loss because the cattle neither leave the stems nor waste the leaves by shaking them off.

Like silage, alfalfa meal is an excellent winter feed, and when moistened or scattered on snow takes on an inviting green color. The cost of making alfalfa meal from hay is from 75 cents to \$1 per ton. Considering that the meal sells for about \$6 more a ton than hay, the value of the grinding process is obvious. Its only drawback is the dust, which even the most modern methods thus far have not been able to get rid of.

Grinding corn with the husks on is another practice that has found considerable favor, especially as it saves the work of husking and makes a palatable nourishing feed. It is well to consider that corncobs, though nearly a third crude fiber, contain 56 per cent of carbohydrates (energy-producing feed), or about four fifths as much as corn kernels.

Cottonseed is another farm product easy to grind, except that in an ordinary hopper it bridges over unless agitated. There is a special cottonseed hopper now made which has its sides mechanically vibrated to insure continuous grinding.

Ground feed of all kinds is especially valuable for cattle, for old horses with poor teeth, also, for teething colts. Another class of stock that needs to have its feed well ground is horses that are worked hard for long periods at a stretch. They need food which has the outer hull removed so the inside is more easily digested.

A good grinding mill, requiring about four horsepower to operate,

EW



An improved manure spreader costing about \$80 spreads manure two feet beyond the sides of the wheels

costs around \$25. Such a mill will grind corn and all small grain. A mill costing about \$60 will grind two kinds of grain and also hay at the same time, giving a well-mixed ration.

The cost of running a small mill averages from one to two cents a bushel for small grains. This means that a mill will about pay for itself by the time it has ground 1,500 bushels, if you figure the cost of the custom grinding at five cents a bushel.

A grinding mill is not a hard machine to operate, and few users have trouble. Those that do, almost invariably trace their difficulty to the improper speed of the mill, and that is easily adjusted by a change of pulleys.

One manufacturer in discussing the subject of grinder speeds gives some good advice that applies to other machinery as well.

"The principal difficulty," he says, "that we find is belting from a too small pulley to a too large one. This is likely to cause slippage. The speed may be all right, but it is getting the speed in the wrong way. We find this trouble especially with belting to line shafts.

"Here's another important matter," he went on, "farm labor is becoming so hard to get that we like to sell mills complete with bagging and elevating attachments. For example, with one mill costing \$160, one man can run the engine, feed the mill, remove the sacks, and grind a lot of feed in a day, without working very hard either."

Mix and Grind at the Same Time

ONE of the most striking developments in farm-sized mills is the combination hopper by means of which several kinds of grain can be ground and mixed at the same time. For example, one hopper is made so that you can grind small grain with ear corn. Such a hopper costs about \$3.50, and the proportion of each kind of grain can be regulated at will.

Most modern mills now have safety attachments, and provision for keeping them from breaking when hard,

foreign substances are accidentally fed. One mill has a spring device that allows the grinding plates to spread apart so that gravel, nails, screws, and pieces of metal may pass through without breaking or even stopping the mill. Another has a safety lever easily reached from any side of the mill that throws the grinding plates wide apart instantly.

From what has been said, you can see that grinding mills have a large variety of uses and advantages, so much so that the neighborhood grist mill is likely to disappear in about the same way that skimming stations have been put out of business by the small cream separator.

Stone crushers will probably go through a similar development, though at present very few readers probably can see how it would be practical for them to own one. The principal uses are to crush rock for roads and concrete work, and to pulverize limestone for spreading on sour soil.

The most popular limestone pulverizers are those of the swing-hammer type.

Imagine a threshing-machine cylinder with heavy bars of steel instead of teeth. Then picture to yourself the concave with a grating at the bottom, and you have an idea of a limestone pulverizer. The fine limestone falls down through the grating, and the lumps stay in the machine until broken to pieces by being smashed against the sides of the crusher by the hammers. For the smaller pulverizers the lumps of limestone must be first broken up to about twice the size of large potatoes. The larger machines have crusher jaws that take pieces as big as any man can lift; and, by the way, it's a good plan to get a mill having a low-down feed because that saves a lot of labor.

Several Ways to Apply Lime

A LIMESTONE pulverizer costs from about \$450 to \$1,000, and requires from eight horsepower upward to run it. The usual speed is from 1,000 to 1,400 revolutions per minute.

Limestone rock varies widely in quality, some containing a large amount of sand and flint. One company makes free crushing tests of any material sent to it, and on the basis of the result definitely guarantees the amount of stone its machines will handle.

An average-sized crusher will turn out crushed rock at the rate of about two tons per hour, and will pulverize rock for agricultural use at nearly the same rate. At present, crushers of this kind are rather a heavy investment for individuals, and are sold more largely to farmers' clubs for community work, also to threshermen, and others who have large engines, for custom work.

For spreading the pulverized limestone on land, the best implement is a special fertilizer or limestone distributor. These are made to feed evenly and yet not clog or break, even if there are hard lumps in the lime.

But for the man who has only a little to spread, he can use a manure spreader with fairly good results, especially if it is equipped with a limestone hood which goes over the feeder. This hood, costing about \$5, discharges the pulverized stone near the ground so that it does not blow all over the driver and team.

Among other manure-spreader improvements and developments are the wide-spreading devices. Several spreaders are now made which will throw manure to the side so far that the strip spread is twice as wide as the spreader itself.

This enables a man to cover more ground, and the wheels of the spreader do not pack down the manure in spreading the next strip.

The best spreaders are low down for easy loading, have shock-absorbing springs or devices so as not to jar the team when thrown into gear, and also have roller bearings for easy draft. One of the most important things to consider in selecting a spreader is to get one that will turn short in a small yard and around barns. This advantage is not so apparent when looking at a spreader on a display floor, but you can well afford to sacrifice many small details to get a spreader that turns short. [CONTINUED ON PAGE 14]



A limestone pulverizer costs from \$450 to \$1,000, and requires from eight horsepower up to run it. The average machine will pulverize about two tons of rock an hour

The Editor's Letter

At Coolfont Farm, October 11, 1915

AT A CONVENTION in Chicago this summer I heard an inspiring address delivered by an Oklahoma man who runs a general store at some crossroads point far from the railway. At this convention were thousands of publishers, advertising men, merchants, and manufacturers, many of them very prominent; but the speech of this country merchant was the gem of the program. Why? Because it took for its text the word "Service." This man sells goods; but he does more. He acts as a sort of unpaid hired man for every farmer in the whole countryside. He takes an interest in farming. His concept of his business is that the merchant is a man who keeps on hand a collection of goods and holds them until people come in and take them away. He charges a profit because he must have wages for waiting while people make up their minds to buy. But this profit is not all he works for. He works for the betterment of every bad condition in the county.

He brings in some dairy cows and tests them to find out whether they really are better than the scrubs. He buys the butter or the cream when the better yield comes to market, but that isn't what he is working for. He wants those farmers to be more prosperous. So he can make more money out of them? Yes, of course; but the man who thought only of that would never do these far-sighted things. He thinks of something more than more eggs to buy when he gets up a chicken show back of his store, and has an expert come to judge the fowls. He wants the people to be happier as well as more prosperous.

He wants the boys and girls to grow up, marry, and settle down right in that neighborhood; so he works directly and indirectly to get things going in the way of corn clubs, canning clubs, pig clubs, and the like. So he can make more money through their remaining in the country? Why, yes,—that for one thing; but if that were all, he would adopt a pinch-penny system to make money, and let the boys and girls go hang. What the man really wants is to have something to do with making all the folks thereabouts happier.

They feel it, too; for you can't fool the people who meet a man constantly. They know that he would rather do something for the neighborhood than sell a bill of goods—and there isn't a keener man for selling goods in Oklahoma.

Will Merchant Become County Agent?

I AM reminded of this merchant by a letter I have just received from a merchant in St. Lawrence County, New York. "I have just read your article, 'Youth Leads the Way,'" says he, "in the September number of 'The American Magazine.' What is said in that article about the young people's clubs in the country, and improvements in corn-growing and the like, interests me very much; and I am writing you for advice and assistance. I am interested in better farming, and have wanted to see more done for the farmers of this vicinity.

"I have a general store in the heart of a good farming section. I publish a store paper every month. I want to branch out and give my trade some good helpful articles on various phases of farming. I should like to see corn clubs organized, and other helpful clubs; but I do not know enough about the workings to go ahead. If you could advise me how to proceed, or on whom to call for help, I should be very much obliged."

I suggested to him that the Agricultural College of New York, at Ithaca, is always ready to help in such cases; and that if there is a county agent there he is a good man on the ground who is always glad of every helping hand. And I predict that one of these days this merchant will be an unofficial assistant county agent, if there is one in the county, and an unofficial county agent if there isn't an official one.

I profess to know nothing about merchandising, but I think I have some idea of human factors; and I am convinced that the country merchant thinks too much in terms of profits and too little in terms of human beings.

This Oklahoma man began a very few years ago with fifty dollars' worth of goods in a little one-room shack on the prairie, and is now doing a business of twenty-five or thirty thousand dollars a year. He may howl a little about people buying elsewhere, but he doesn't need to. He has a triple cinch on the trade of that part of the country because he gives the neighborhood so much besides bargains in goods. They like him. They want to meet him. He is interested in their affairs and he knows their problems. If he can't solve all of them, he can at least try.

I told this New York merchant that, in my opinion, if he went out among the farmers trying to do things to them he would fail, but if he showed a willingness to do things with them he would find a cordial reception after the community had time to recover from the shock.

I once knew a county superintendent who had in five years made herself a sort of second mother to all the children in a big county. She was familiar with the inside of most of the homes. Scarcely a man, woman, or child in the county could be found who had not received some helpful favor at her hands. She was a part of every progressive movement in farming as well as in education. She pervaded that county and exhaled a spirit which the whole county felt. Suppose she had been a merchant and had done this very thing, in the same tactful, skillful manner, giving offense to nobody

and serving everybody—do you suppose she would have failed to make a commercial success?

Many a candidate for a county office spends months of time and a great deal of money in getting acquainted with the voters in order that he may secure an office which will pay him from twelve hundred to five thousand dollars a year, and after he has held it two years he has to be elected all over again. Why can't a merchant do as much to secure the insight into the problems of the people, and the chance to help in making things better, when the campaign might give him a business worth much more than the county office, permanent in character, and which would never cease growing as long as he lived?

How many merchants have ever seen the inside of the homes of one man in a hundred of their customers? Not many. But this New York merchant and this wonderfully successful country store-keeper in Oklahoma are both going out and taking as much interest in the home affairs of their people as does a successful teacher or minister.

As a matter of fact, we are not getting anywhere near the good out of our merchants as we will when such men as these are found in the stores of every community. There are too many stores. A great many men are in the merchandising business who are making less money than they would driving drays. It will be a good thing for everybody, including themselves, when they close out their stocks of goods and enter some other occupation.

That's what they are doing, too, all over this country. That is one reason why conditions everywhere are getting better, why we are getting better schools, better roads, better churches, better farms and farm homes. Many other factors enter into the improvement, of course, but the wide-awake merchant, the one who sees in such advancement better business conditions for himself, is the one, like this New York and this Oklahoma man, who is taking part in the community life. Selfish, you say? No, not in the sense of the man who wants everything to come his way without effort. He may be selfish in one sense of the term, but if he is then he is broadly selfish, and that is what all of us covet for our own characters. This new type of merchant represents the highest ideal of the age—service. And just as the new sort of merchant of which I have met these two specimens makes its appearance, the stores will become bigger, better, and fewer, and the men who keep them will be found to be bigger and better too.

Herbert Quick

Booze and Baseball

How Some Star Players Lose Out

By HUGH S. FULLERTON

ONE year ago last spring, during the training season of the major-league baseball clubs, I visited the training camps of a dozen teams in the South. With one of the teams was a boy whom I had recommended to the manager as possessing great promise as a pitcher. The manager had told me that if he could find one more winning pitcher to add to his corps he would, in all probability, win the pennant. Naturally I was interested in the youth I had found, and anxious to see him "make good." During my visit with that team my room was connected with that of the first evening, after a hard practice session, I was writing and he was dressing, when he called to me to drink a bottle of beer with him. The territory was "dry."

"Where did you get it?" I inquired. "Had a case sent over to me from New Orleans," he replied, opening a bottle.

"Well, young fellow," I remarked, "you're making a fine start in the big league. I tipped off the manager that you were all right and here you are drinking before you get your uniform dirty."

"Oh, a bottle of beer after practice does a fellow good," he argued. "Does, eh?" I inquired. "Well, maybe so. I've heard young players say a bottle of beer did them good, for about twenty-five years, and never have seen the ones it did good make good."

That started the argument. Several other players joined in, the majority of them declaring a bottle of beer did not hurt anyone. We resumed the argument later in the evening. The manager, the trainer, the best pitcher on the team, and the best ball player on the team took my side of the debate. The

majority of others sided with the youngster, declaring that a bottle of ale or a bottle of beer not only did not hurt them, but did them good. I offered to prove to them that it hurt, and when I got back home to the "dope books" I set to work to find some way of convincing my young friend.

Ball players are the only class of men in America whose daily doings are recorded absolutely and accurately in figures. We have complete statistics of almost every move they make in seven months of play.

At the outset I feared that the figures would "show me up," since I was dealing with men of extraordinary strength, who work and live outdoors, exercise daily and regularly, and "work off" the effects of drink through much exercise and perspiration.

Drinkers Don't Last as Long

MY FIRST plan was to see how long drinking men and total abstainers last in the game. I took the baseball record books from 1903 to 1915 and, opening the 1903 book, I chose the names of 32 ball players then in active service who, to my certain knowledge, drank intoxicating liquors. The majority of them did not drink to excess. I purposely threw out the names of several hard drinkers and selected my 32 from the "oh, a bottle of beer don't do no one no harm" class. Scouring through the same book again I picked out the names of 24 players who did not drink.

Not all these men were total abstainers. Some of them would take a drink on certain occasions. I think there were 11 who never had touched a drink at all. Not one drank regularly, and very few of them touched even beer from March to October.

I followed the records of these men year after year to see what happened to them and when they dropped out of the game. Here are the figures:

	1903	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14
Drinkers	32	29	24	21	18	12	9	5	4	2	2	2
Non-drinkers	24	22	20	19	19	18	16	12	11	9	9	8

If you know baseball players, you know that, next to his money and his family, a ball player loves his base hits. I thought, perhaps, if I could show those argumentative athletes that moderate drinking affects batting it would help convince them.

Taking the record book from 1907 to 1915 inclusive, I picked out 13 "bottle of beer don't hurt me" players, including 3 of our really great hitters and 13 total abstainers, only one of whom is a normal .300 hitter. I figured the composite batting averages of these two classes with this result:

	1907	1908	1909	1910
Drinkers	.246	.243	.236	.231
Non-drinkers	.238	.240	.240	.233
	1911	1912	1913	1914
Drinkers	.226	.227	.221	.220
Non-drinkers	.241	.243	.240	.241

These figures seemed remarkable to me. They reveal the fact that the drinkers were the better hitters at the start, that they declined steadily in batting, while the non-drinkers not only held their pace but improved a little. The figures show the drinkers' averages varied largely each year, while the non-drinkers batted within a few points each season of what they had done the preceding year. The figures showed the non-drinkers were the more reliable men, and to my surprise I found that the 8 non-drinkers played in eight and a fraction more games per season than the eighteen drinkers did.

One would imagine that drink, if it affects athletes at all, would show itself in their speed. Therefore I examined the base-running averages from 1903 to 1914. I selected 20 drinkers and 20 non-drinkers, keeping the lists of 20 full by adding new men when the original players chosen were sent to the "benches" or dropped out of the game entirely. I added their stolen bases with this result:

	1903	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14
Drinkers	342	341	276	346	331	327	382	361	377	409	332	326
Non-drinkers	351	363	384	355	414	351	375	391	402	478	406	397

That table did not seem to prove conclusively that drink affects speed, even though the non-drinkers stole more bases. To test it further, I took 20 non-drinkers and 20 drinkers of 1903 (the same men chosen in the preceding table) and traced them down through the records to 1915.

	1903	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14
Drinkers	342	309	280	221	190	159	104	92	61	30	21	17
Non-drinkers	351	363	341	305	292	269	221	187	230	164	132	134

Finally, for the benefit of my young friend, I examined the records to see whether or not a bottle of beer after the game affects pitching. I selected a number of drinking pitchers who were in the game in 1907 and still remained in the National, American, or Federal leagues last year, and a similar number of non-drinking pitchers who still are active. I figured the number of games they have won and lost each year with the following result:

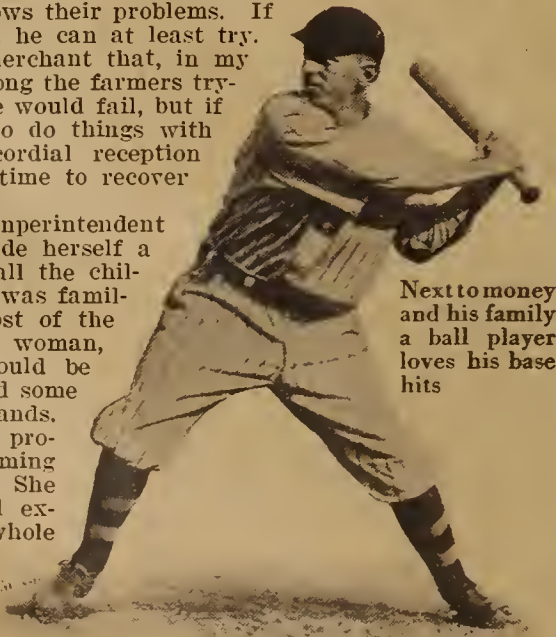
	1907	1908	1909	1910	1911	1912	1913	1914
W. L. W. L. W. L. W. L. W. L. W. L. W. L. W. L. W. L.								
Drinkers	91	87	95	90	82	91	79	94
Non-drinkers	84	77	88	73	83	80	92	80

The non-drinkers pitched more games and won a better percentage of their games.

To complete the argument, I took the original 32 drinkers and the original 24 non-drinkers of 1903 and set about learning what I could about them. I was not able to learn about all, and in the following table I have included some of those who still remain in the baseball business among the "prosperous." However the incomplete table shows what has become of them.

	Prosperous	Still in Business	Down and Out	Dead	Missing
Drinkers	5	4	6	8	3
Non-drinkers	14	11	1	2	0

Truly a bottle of beer does do harm, much harm.
EW



Next to money and his family a ball player loves his base hits

Raising 300 Skunks

A New Industry Pays Well - a Connecticut Farmer

By PAUL L. LOCKWOOD

REARING skunks on a dairy farm has proved such a profitable venture for Irving June, whose farm is in Fairfield County, Connecticut, that this year he is preparing three acres of waste land for the use of skunks.

Thirty star black females and six star black males compose the breeding stock. A star black skunk is black except for a small star-shaped white spot on the back of the head.

More than 200 young skunks were born to the thirty females during May. This constitutes the 1915 litters, as skunks have only one litter a year.

Mr. June is not a newcomer in skunk-rearing, but started experimenting on a small scale four years ago. He now has the largest skunk farm in New England. He found that experience was needed in raising skunks, the same as in raising chickens, and it is on the result of this experience that he decided to engage in the business on a larger scale. While skunks need constant attention, he has discovered that they can be raised cheaper than chickens. The pelt of a black skunk, when prime, is worth from \$2.25 to \$5. Last season, which was a poor one, owing to the war, the highest price reached was \$2.25.

Few of the skunks on the June farm have been killed for their pelts. The young bring a much higher price from the fur farmers about the country. Mr. June sold ten young star black females for \$10 apiece to a Nova Scotia farmer last summer, and could have sold his entire stock at the same price, but refused to do so. The animals were shipped from Stamford to Nova Scotia by express, and arrived at the destination in excellent condition.

Skimmed milk from the dairy, garbage from the city, stale bread from the bakeries, and dead horses furnish the food needed for the skunks. Wild berries and sweet apples are fed to the skunks now and then for a change.

A remarkable feature about Mr. June's skunk-farming is the method of economy he employs in not allowing one morsel to go to waste. Dead cattle are always numerous in the summertime, and most of the farmers are only too glad to get them carted away, as it saves the trouble of burying them. Mr. June has a telephone on his farm, and an automobile. The hides of the carcasses fed he sells to local dealers, the bones he collects and grinds for fertilizer, while the surplus supply of meat he dries out by constant smoking. He always has a large amount on hand in case the supply of fresh meat should decrease. The price he receives for the hides more than pays for the trouble.

Skunks are very fond of huckleberries and wild cherries. In gathering huckleberries Mr. June opens an umbrella, turns it upside down, and places it beneath the bush and then shakes the bush. By this method he has found it an easy matter to fill a 14-quart milk pail in a few hours. A large sheet is placed under a cherry tree. The tree is shaken and a supply of the fruit is gathered quickly.

Make Homes in Ordinary Boxes

THE pens for the females in the breeding season are six by five feet in dimension, and the bottom is wired to keep them from digging out during the warm days. A plain, ordinary soap box is used for the brood pen.

The main inclosure is surrounded by ordinary chicken wire, which is buried to a depth of three feet, and the ditch thus formed is filled in with stones, and along the top of the wire, six feet above the ground, a strip of two-foot wire is placed at right angles to the side. This is to keep the skunks from climbing out. Mr. June is planning to increase his acreage again next year.

In catching his initial stock, Mr. June used various devices, such as six-inch stovepipe traps, box traps, and others without much success. He finally resorted to the small No. 0 jump trap. The fine steel jaws, which frequently break the legs of the animals they catch, were covered with tar tape. Not one of the skunks caught was injured except for a little lameness. The skunks caught recovered from the lameness in several days. Taking skunks from the trap without being sprinkled by their musk is a very simple matter when one knows how.

For one who is the least bit afraid of skunks the best method is a burlap feed bag. Tie an ordinary flour barrel hoop in the mouth of the bag and in the closed end of the bag make an incision about two inches long. Holding the hoop end in front as a shield, approach the captured animal slowly and insert two fingers through the incision made in the closed end of the bag. Take hold of the trap chain and drag the skunk through the hoop and into the bag. While holding your foot on the chain and by this means keeping the skunk securely in the far end of the bag take the hoop out and tie that end of the bag. It is an easy matter then to release the animal from the trap through the burlap bag.

Mr. June's method of taking a skunk from the trap is to take hold of the chain after slowly approaching the animal. A skunk when caught in such a position

will at once turn and face you. The animal is an exceedingly slow thinker, and before it has a chance to turn around and throw musk he catches it by the tail and raises it from the ground. In such a position the skunk is perfectly powerless and unable to throw its scent.

A skunk very seldom bites, and its bite is not as dangerous as many persons believe.

In catching his initial stock Mr. June found it quite a difficult matter to secure star black skunks, the only profitable kind to raise. However, he found that by mating a star black male to a full-stripe female he obtained a little more than half of which was star black. Since then he has sold his half stripes and full stripes.

Skunks bear but one litter a year, which ranges from four to eight in number. Six is the general average. The breeding season is about the middle of February. It is a good plan to place one male with from four to six females in one of the brood pens about the latter part of January. They should be kept together until about the middle of March, when they should be separated. Every female should be placed in a brood pen by herself. There should never be more than one female in a pen. They will fight when left together after the male is taken away, and will frequently steal each others young, carrying them off by the nape of the neck like a mother cat carries her kittens.

Some who have attempted to raise skunks declare they are guilty of cannibalism. There is but one cause for this—the lack of proper feed. If the skunks are given a proper ration of meat at stated intervals they will never eat one another. Skunks should be fed once a day, at dusk. Like chickens, they should not be given more at a meal than they will eat.

A female while pregnant should be given plenty to eat, and meat above all things. Fresh water should be kept always in the pen. If a female is denied meat she will frequently eat her young when they are born. Skunks are fond of bread and milk. This makes an excellent ration. Corn meal is also good. Honey and candy are delicacies as well as mice and all kinds of insects. During the cold winter days, and after the skunk breeding stock has been fattened, they should not be fed more than twice a week. If they are too fat when the breeding season comes around, they will not mate. Skunks are very fond of all kinds of cooked vegetables.

The young should not be given too much meat after being weaned, as it has a tendency to cause distemper. Three feeds of meat a week are sufficient.

The kittens should be taken from the old about the middle of August. They should be turned out in a large runway together, and fed every evening. The diet for the most part should consist of fruit, vegetables, and bread and milk every day.

One hundred to one hundred and fifty skunks to the acre is a good proportion, and the more burrows the better. If there are not natural burrows or ledges for them to "den up" in, it is a good plan to build some, but do not use any lumber, as it has a tendency to spoil the fur.

A box within a box makes the best brood pen. The larger box is about four by five feet, with one side left open, the open side facing the south. Inside of this is a small soap box with a hole just large enough to allow the female to enter. Mr. June fills the smaller box with dead leaves or straw and a little earth. The box should be cleaned out every month.

When the skunks are about three weeks old the scent glands can be removed easily by an extremely simple operation and without any danger to the operator. All that is needed is a sharp penknife and a pair of surgical tweezers. There are two scent glands, one located on the right and the other on the left side of the rectum. An incision about half an inch long will reveal a little white gland. Lift it up by the tweezers and then cut the thread connection. This is all that is necessary. The incision need not be a deep one, and the wound heals entirely in several days. Mr. June operates this way on all his skunks, and has not lost one by this operation.

The fur of the skunk many times becomes prime the latter part of November. It depends upon the season. Sometimes skunk fur is prime in the Northern States about the last week in October, but this is extremely rare. Mr. June always waits to take the pelts until the



Foundation trenches for new brood pens are shown in the foreground. Mr. June is standing in the old brood pens

first week in December. That date is most profitable.

When a skunk is skinned for the market its pelt should always be cased, and never ripped up the stomach. The fur side should always be turned in. Salt or alum should not be put on the hide if one intends to ship the pelt to the market. A V-shaped shingle makes the best stretcher.

If the animals are kept in close confinement, and especially in boxes, the fur will become ragged. This is one of the chief reasons why it is said skunk-farming will never become a success. It is only necessary to give the skunks plenty of runway, and the furs are not only as good but superior to those taken from the wild animals. When the skunks are taken care of and given plenty to eat they grow much larger. They are about half as big again as the wild skunk. Mr. June has sold them in the New York market at a much higher price than those given for the pelt taken from the wild.

Black Pelts Brought \$4.50 Each

WHEN Mr. June took his first lot, which numbered fourteen, to New York, he was rather dubious as to the price he would obtain. That season the black pelts were bringing \$4.50 each.

He carried his lot to a dealer that ships thousands of dollars' worth to the Leipzig and London markets. The dealer commented on the fineness of the fur and its size. Mr. June did not tell him that he had raised them in captivity. The following is the conversation as Mr. June tells it:

"I wonder, Mr. Dealer, how it would be to raise these animals?"

"Can't be done; the fur is never any good and you can tell it the first thing. For instance, you take this pelt of yours, any one of them, and see how fine and glossy the fur is. Now if they had been raised in captivity the fur would have been what we call scraggly; that is, dull and torn."

He gave Mr. June \$70 for the lot, or at a rate of 50 cents more than the market price for every pelt. Mr. June did not tell him that he had raised the skunks in captivity.

Skunks are subject to three diseases: distemper, mange, and worms. The animals should be treated the same as dogs suffering from these diseases.

The fur of the skunk is becoming more popular every year, and for many years has been paraded before the public as Alaskan sable, but it is coming into its own now, and is sold under its own name. The fur is extremely popular, and is made up mostly into muffs and neckpieces. While the fur of the skunk is not quite as silky as the fur of the black fox, it wears much longer and is just as glossy and almost as long. A black fox pelt is worth from \$500 to \$2,000.

Cheaper Engine Fuel

THE reader will remember the announcement made some months ago that a young chemist in the United States Bureau of Mines had perfected a method by which gasoline may be made in great quantities from the heavier mineral oils—kerosene and even oils so heavy that they are now utilized for machine oils only. Old engineers and chemists spoke lightly of the matter, and gave the world the idea that there was probably nothing in the new process. The Government had such faith in it that it guaranteed

the Aetna Explosives Company the sum of \$200,000 as a subsidy for putting the process to use on a commercial scale, with the privilege of canceling the subsidy as soon as the business was shown to be a commercial success. Its success was so immediate that the contract was canceled on September 11th.

The new process is most interesting to farmers because of the possibility of making practically all of the crude oil into gasoline for their motor cars and gas engines through a process the patents of which are public property; but the Aetna Company has used it principally in making benzol and toluol, which are used in the manufacture of the highest explosives. The Rittman process places the United States on a self-sustaining basis in case it ever needs to make munitions of war on a large scale.

The tractor which plows the field and the shell which rips it up are both supplied by the new invention. The sword and the plowshare are both beaten out on the same anvil of science.



Scent glands are removed from skunks. Mr. June and granddaughter are holding



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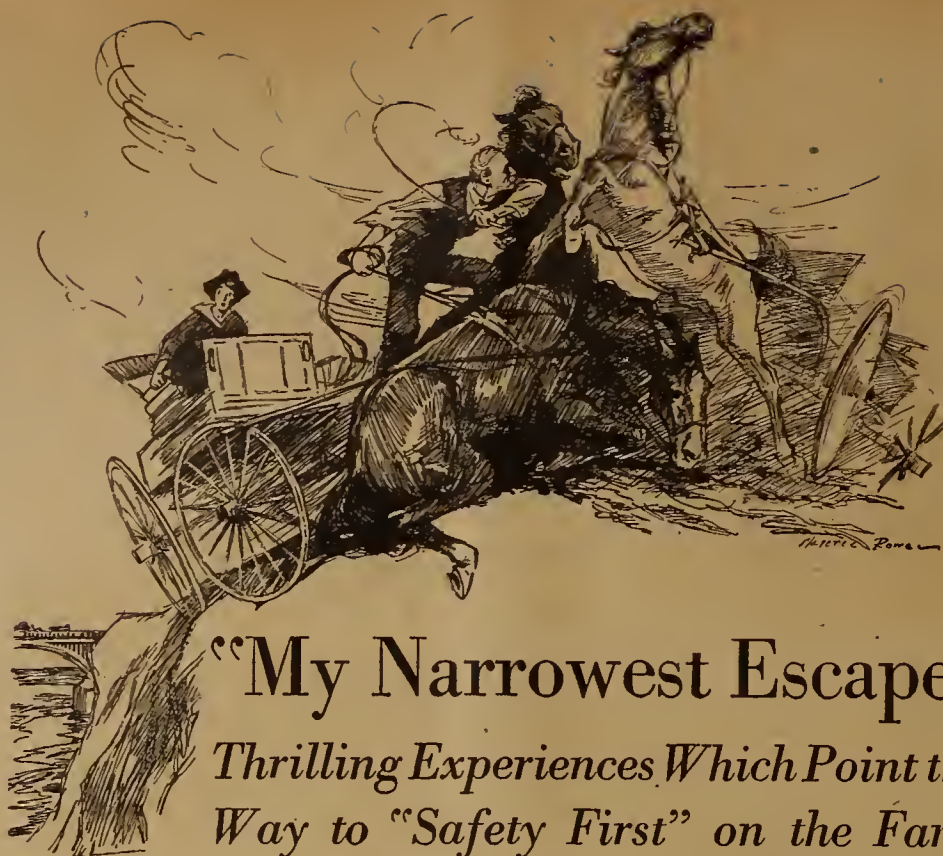
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"My Narrowest Escape"

Thrilling Experiences Which Point the Way to "Safety First" on the Farm

A Day of Accidents

By Ida M. Shepler

WHEN young I lived on a farm not far from the city of Ft. Wayne, Indiana. At the time I was eighteen years old, I had two close calls to death in one day.

My father's favorite team was a pair of very large, matched black horses, the envy of all the horse buyers about, though nothing would buy them from father because, though spirited, they were bred and trained to gentleness, the best of horse sense, and perfect faith in the word and presence of their master. Had it not been for this last, allied to strict obedience, I am sure that I would never be here now to write this.

Before we reached Ft. Wayne that day, far across the wheat fields we saw a lot of men standing about someone lying upon the ground. "An accident of some kind," remarked my father. Afterward we learned that a man had been thrown in front of a reaper by a runaway team of horses and horribly mangled, and even then a doctor, driving a young horse, was galloping out of the city to his help.

It was this doctor's horse that gave us our first close call. Frightened at the doctor's urging he took the bit in his teeth and ran away, pitching the doctor out. We had just cleared a large bridge over the St. Marys River, and had come out close to the edge of the road where, far down among boulders and sharp rocks, lapped the river's edge.

Around a bend in the road came the doctor's runaway horse, and jumped straight into our team. Our light buggy was pushed back over the edge of the road, and there it hung, with me gripping at the high back of my seat. I remember that father was out on the tongue of the buggy, whipping the runaway over the eyes, and firmly ordering our horses, William and Mike, to go on. And they did. They fairly helped father whip that plunging horse ahead of them and at the same time pulled up that buggy, hanging with me over the straight down wall.

Father was very pale, but remarked: "It was well that the tugs were strong and held the buggy's weight. How my good boys worked not to go over with all of us."

Farther on we met the dusty, bruised doctor coming in a buggy with someone who had picked him up.

Leaving the city in the evening we were late and hurrying, and presently came to where several railroad tracks crossed the street, with no watchman on guard. The two tracks nearest to us were occupied by freight trains whose engines, close up, kept a constant blowing. The cars were uncoupled and run far enough apart to allow one team to cross the tracks. Father said: "There is no fast train along now, the evening mail has gone by half an hour ago," and drove on without anxiety, though we could see or hear nothing but those freights.

Some boys were playing on top of the freight trains. I thought they were merely calling to us out of sport as we came briskly trotting up to the tracks, but as we passed between the cars I realized that they were warning us, and Father, hearing but one word, "Back," called the same in the next breath to his horses, halfway across the next track, on which the belated evening mail was now rushing. They came back on the instant, but the engine was so near that it struck Mike's nose. Then both horses

fell down between the freight cars, one horse and the tongue going on top of the other, and Father down with them, talking to and ordering them to lie still, with me yet in the buggy, which they tipped over in their struggles.

Trainmen and Father finally extricated the horses, Mike bleeding profusely. Poor horses! They were frightened nearly out of their wits, and even after the fast run home stood in their stalls trembling all night long. Had they refused to back instantly, we should all have made "just another tragedy."

Man in the Well

By T. Judson Taylor

I WAS cleaning out a well 98 feet deep. One of the men at the top who was handling the windlass carelessly let fall into the well a fence post 4 by 6 inches and 6 feet long. Hearing the noise I at once sprang to the side of the well.

The post came with increased momentum, end foremost. It missed my head, caught in the breast of my coat, which was buttoned, tore the buttons off my coat and vest, and stood on end between my feet. I was not hurt, but that is the last well I have gone into for any purpose.

The Deadly Gun

By J. A. Brown

SOME few years ago I lived in Indiana. I was a widow with six children. My oldest boy was fifteen and, like so many boys raised in the country where rabbits were plentiful, was crazy for a gun. He had his father's double-barreled shotgun, but wanted something different of his very own.

One winter morning after he had been out hunting he came into the room where I was sitting in a large rocking-chair. He sat down beside me and said, "Look here, Mother." He wished to show me something that was wrong with the stock. I stopped rocking and leaned forward and said, "Frank, isn't that gun loaded?"

He said, "Yes, but there's no cap on it," and raised the hammer to show me. He let the hammer down, when "Bang!" went the gun, tearing a piece out of the back of my chair, making a big hole in the leg of the table and another in the plaster. He will never be whiter when he is dead. And it cured him of his liking for a gun. He has never wanted one since.

If I had not leaned forward, the load would have gone through my body and my children would have been motherless as well as fatherless.

Desperado Farm Hand

By Sarah J. Brown

IN 1864 we lived in Michigan where my husband was an extensive wheat raiser. Hired help was scarce and the farmers often employed whoever came along. So when a burly-looking young man applied we immediately employed him. He called himself "Jake Smith." Wheat-threshing was in progress, and after that came the marketing. Each day much wheat was hauled away and sold. Naturally Jake Smith believed there was a goodly sum of money around.

One night my husband returned from market and inquired for Jake. I was ill at the time, confined to my room with a week-old infant. The maid had gone

home for a short time and I was alone in the house. My husband went out to look for his man. In a few minutes I heard an awful scream. My heart stood still with terror. But after some interval my husband came in. He had an ax in his hand that he forgot to put down before entering.

He said: "I went to the barn to look for Jake. He was lying on the barn bridge. I feared he was hurt and stepped close to him, and he sprang up with this ax raised over my head. I suppose I screamed in mortal terror. But also with a quick motion I seized the ax handle and wrested it from him. Jake swears he was asleep and sprang up startled."

My husband was puzzled, but being a very easily deceived person he did nothing.

In the morning Jake left, and a few days later a murder was committed near Edwardsburg, Michigan, with an ax. The murderer, who proved to be Jake, was caught and tried, and sentenced for life to the penitentiary. He confessed that his intention in our case was to kill my husband and, supposing the money was in our bedroom, to kill me so I could tell no tales.

I suppose that was my most narrow escape. You know I must be old now, but the memory of that occurrence fifty-one years ago, and the agony of fear I experienced at that time, has never left me.

Poison! Stop! Look!

By John C. Umsted

THE narrowest escape from death I ever had was in the spring of 1903 when I took a teaspoonful of fluid extract of nuxvomica by mistake. There were two bottles of the same shape and size on the top of a tall cupboard, one at one corner and the other three feet away in the other corner. One was nuxvomica and the other a blood purifier. By some means the bottles had been changed. It was not yet very light, and the fire had just been started in the kitchen stove.

I reached up to get what I thought was the blood purifier, which I was taking as a cure for boils, of which I had at that time three or four. I poured out a teaspoonful, which I immediately swallowed. It felt like a streak of fire going down my throat. In that instant I knew what I had done, and to make sure we examined the label.

My wife knowing that coffee is an antidote for strychnine (which is of the same nature as nuxvomica) made me some immediately, of which I drank two cups. We had no emetics except common salt and water. The nearest neighbor was nearly half a mile away, and the nearest doctor five miles. I sent one of my boys to the neighbor's for mustard, or any emetic he had. I sent another for my father, and another for the doctor. I knew the doctor could not save my life. That lay with us, and if we were successful he might render some assistance afterward.

The next thing we did was to dissolve in a teacupful of water as much salt as it would hold in solution. This I drank. I then waited a little while. My wife meanwhile pounded me on the back, trying to coax my stomach to revolt.

I drank another cupful of the acrid salt and water, and I waited a little, but it seemed useless, still I had no uneasy feelings. They were all anxious to do something for me, and had moved a cot out in the kitchen by the fire, and induced me to lay down; so I lay down. I lay there a few minutes, then I said: "There is no use of my lying here. I am not weak or sick. Now if I lie here and do nothing I shall surely die."

"Well, what will you do?" asked my wife.

"Take more salt and water," I answered. "There is nothing else I can do that I know of."

She prepared another cupful of the mixture. I started to get up, and had just time to reach the door when up it came. I drank part of the salt and water she had prepared, and almost immediately threw it up. I drank the rest, and what was thrown up was clear.

In a few minutes I began to shake like one with the ague, and my wife asked me if I was cold. I said, "No," but told her that she might put a quilt over me, which she did. The shaking lasted perhaps for twenty minutes or more.

About this time my near neighbor arrived with the mustard. My father and one of my brothers came next. Last of all, the doctor.

The doctor asked to see the bottle from which I had taken the nuxvomica. He could not believe that it was the fluid extract. When he saw it he said, "You took enough to kill several men."

Strange to say, in a little time I was free from boils, and they have troubled me no more. And from that day I have enjoyed reasonably good health, but I would not recommend anyone to seek health in that way.



Be sure to plow the weeds under deep enough. That's the main point

Killing Next Year's Weeds

By J. D. OLIVER

THE haste with which plowing is usually done, and the poor after-preparation, is one of the great reasons why crop averages here in America are lower than in most European countries.

In such times as we are now experiencing, farming should be, and usually is, a most profitable occupation. Prices of produce are high, and will probably remain so for some time to come. In no sense should we diminish our efforts on the assumption that overproduction of the staple crops will be great enough materially to change prices. The law of supply and demand ultimately affects prices of commodities regardless of artificial devices that man may use to interfere with this natural equalizing of commodity and money values. The food supply is not increasing as fast as the demand, hence the greater the crops a farmer grows the more money he makes.

The greater part of virgin fertile lands in the United States is now under cultivation. The farmer cannot hope to leave his old farm and seek new land. He must make his farm produce more. We must make better seed beds and do better cultivating.

Look to the Seed Bed

The basis of the seed bed is plowing. It is impossible to build a house that will stand the wear and tear of weather and usage unless the foundation is solid. Just as soon the foundation weakens, the house sags. So with the seed bed. Unless it is made right from top to bottom, some defect will appear to stunt crop growth. How often have we seen corn force its bright green leaves through the ground, and flourish most wonderfully for a short time, then begin to wilt and at harvest time give but a few nubbins for a crop.

More than half the crop losses are caused by poor seed beds—that means faulty plowing.

Let us take the thrifty Scottish farmer as an example. He insists on plowing a furrow as straight as an arrow and at a uniform depth. The furrow slices must be laid exact or he is dissatisfied with the job. The after-preparation is done just as carefully. The Scottish farmer never is in haste to get the ground plowed, and he never plows when the ground is not in condition. He always raises good crops.

We American farmers do not need to be as particular as our brother Scots; but if we were, how much faster would our bank accounts grow, and that too at times when high prices prevail!

Mother Earth is good to us, and in spite of our waywardness has made the American farmer the most envied of any in the world; yet, like every other fond mother, she sometimes spanks us when we violate her rules. If we would study her ways more carefully and work with her instead of against her, our farms would blossom more bountifully than our wildest dreams, and our coffers would jingle most joyfully.

We American farmers are wealthier now than we ever have been. We enjoy more of the comforts of life. We have our automobiles, electric lights, rural mail deliveries, telephones, and modern machine equipment, all of which means that our earning capacity is high.

But remember that our source of wealth lies in the soil, so it is important that we guard it against loss.

Take this fall, for example. In most parts of the United States wet weather has prevailed. The stubbles are green with rank weed growths. There are sections where the ground was so wet last

spring that farmers let the ground lie with the hope of plowing for fall crops. The summer was wet, and the ground still lies unplowed with a growth of weed vegetation that stands higher than the horses. Most of these weeds have gone to seed by now.

What are we going to do with these fields? Some of us have mowed the land and burned the weeds, others who were in a hurry to get the ground plowed for early fall crops used weed hooks and chains to drag them under and plowed shallow. What will the harvest be? The millions upon millions of weed seeds that were turned under in shallow plowing were planted much better than the grain sown on top of them. The vegetation turned under breaks up capilarity with the ground above, and its moisture content is not enough to promote healthy germination and growth. But the weed seeds in the moisture-laden part will thrive and choke the grain sown above.

The problem of weeds in next year's crops will be a hard one. If this weed growth remains on the stubble, spring plowing will not eradicate the weeds. Burning the stubble will kill many of them, but at the same time we are burning tons of vegetation that will make good humus.

Those of us who have not yet plowed must plow this vegetation under as soon as we can—as much of it as possible before the weeds scatter the seed. Plow deep and bury the weeds on the bottom of the furrow with weight enough above for the earth particles to encompass them thoroughly. This will give the weed seeds an opportunity to sprout, and later the winter's freezing will kill the young weed plants. In the spring we shall have an opportunity to get into the ground early with the disk to make a first-class seed bed and conserve winter moisture.

Tractor Don'ts

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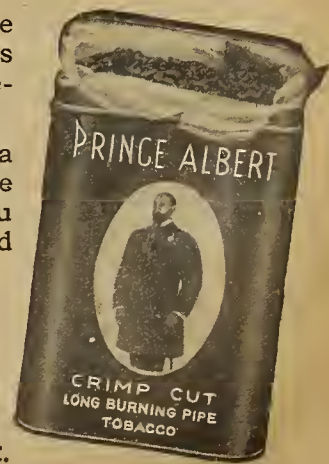
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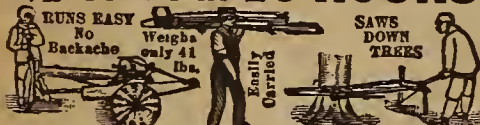
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Banks Make Reasonable Loans to Farmers

By JOHN COLEMAN

Washington, September 23d

I WAS rather surprised to read in a newspaper this morning a dispatch from Atlanta, Georgia, reading as follows:

"The Georgia Farmers' Union, at a meeting here, presided over by Charles P. Barrett, president of the National Farmers' Union, agreed that if Eastern and Southern banks continued to charge high rates of interest for loans on cotton the farmers of Georgia and South Carolina should organize a bank which would loan money on cotton at not over six per cent. A proposed cotton warehouse for Georgia was endorsed, and it was agreed that, if possible, Southern planters should hold their cotton until it would bring 12 1/2 to 15 cents."

I was surprised because I can see no reason why every farmer in the South does not borrow all the money he wants from the banks at six per cent. For that matter, I can see no reason why any farmer anywhere should lack six-per-cent money if he has warehouse receipts for wheat, oats, rye, barley, corn, cotton, or any other readily marketable, staple farm product.

In fact, I reached over to the back of my desk and found a clipping from a newspaper published at Gadsden, Alabama, containing two advertisements—one of the Gadsden National Bank, and the other of the Gadsden First National Bank—urging farmers to come in with their cotton warehouse receipts and get money at six per cent per annum.

Moreover, I have seen in the office of Secretary McAdoo a large collection of such advertisements published by banks. Just as an evidence of good faith the Gadsden advertisements are reproduced herewith so all may see.

Now I make this statement: Any Georgia cotton grower possessing cotton warehouse receipts may go to any national bank, or to any state bank which belongs to the federal reserve system, in the State of Georgia, and get money on these securities at six per cent per annum. How do I know this? Because the bank can take these securities and, by sending them to the regional bank at Atlanta, get money on them at three per cent. Thus the bank would get three per cent for doing the business, the farmer would get his money at the same rate mentioned in the resolutions of the Farmers' Union, and the transaction would be closed to the satisfaction of everyone, I should think, without the trouble of organizing a farmers' bank.

Ruling Applies in Every State

The same thing could be done in any of the territory tributary to the regional banks of Dallas, St. Louis, Richmond, or Philadelphia. If there is any farmer in any of these regions—or anywhere else for that matter—who cannot borrow money from the banks now in existence at six per cent on warehouse receipts for readily marketable, staple farm products, I should like to hear from him. I think he has applied at the wrong bank. For the banks of the United States are now engaged in the greatest campaign for giving six-per-cent money on warehouse receipts ever known in the history of American farming.

The origin is a rather interesting Washington story.

Two years ago all of us had heard so much about the new banking and currency system, and the danger of a central bank of issue, and the Glass-Owen Bill and the like, that we were justified in getting a little confused. We are not justified, however, in allowing ourselves to forget that there exists in the Treasury Building in Washington a body of gentlemen known as the Federal Reserve Board who have under their control the banking and currency system of this country, and that what these gentlemen do or don't do affects the price of things on the farm and the supply of money.

Along in the latter part of the summer these men did some thinking with reference to the needs of the farmer. They came to the conclusion that nothing better could be done for the prosperity of the whole country than to make it pos-

Money for Farmers at 6 Per Cent

We will loan to farmers on cotton, when properly insured, warehoused and margined, in Gadsden warehouses at 6 per cent. per annum

THE
FIRST NATIONAL BANK
GADSDEN—ALABAMA
4 Per Cent. Interest Paid On Time Deposits

Money for Farmers at 6 %

We will loan to farmers on cotton, when properly insured, warehoused, margined, in Gadsden warehouses at 6% per annum.

Gadsden National Bank

Cotton went up 2c a pound a very short time after the ruling went into effect

sible for the farmers to be given money at reasonable rates for the purpose of enabling them to hold their crops and feed them out on the market as the demand might call for them, rather than throw them all on a glutted market for a month or two.

The Federal Reserve Board deals with the twelve regional reserve banks at Boston, New York, Philadelphia, Richmond, Cleveland, Chicago, St. Louis, Kansas City, San Francisco, Dallas, Atlanta, and Richmond.

Every American farmer lives in one of these regions. Every bank with which these farmers deal, if it is a national bank, must be a member of the federal reserve system, and deals with one of these twelve regional banks; and every state bank which has conformed to the rules has been admitted to the system. Thus the national banks must, and the state banks may, belong to the system. This brings the federal reserve system right down to the bank which loans money to you.

Rate of Interest, 6%

Now the Federal Reserve Board at Washington has great powers over interest rates. It fixes the rates of discount on your note when it is used by your bank as collateral for getting money through other banks. The regular commercial rate is four per cent. That is, your bank may take your note, if it is the right sort of note, and by sending it to its regional bank get the money on it at the rate of four per cent per annum. The bank may lend you its own money, and if it has plenty of money it will do that, of course. But if you can give a note properly secured it can lend you money whether it has any or not, for it can send the note in and get "outside" money on it at four per cent. You can always tell what your bank gets for doing business on outside money by subtracting four per cent from the rate you pay the bank. This is how the federal reserve system, which has been put in force within the past three years, actually works.

The four-per-cent rate is fixed by the Federal Reserve Board at Washington. But the board, thinking over the needs of the farmers, decided that it would be a good thing to make a lower rate on paper secured on "readily marketable, staple farm products." But the men on the board, being bankers themselves, knew that in some parts of the country some banks might loan money even though they got it at a low discount rate at interest which would deny to the farmers the benefits of the cheaper money. So they sent out a ruling to all the twelve regional banks, saying that the discount rate on such paper would be three per cent instead of four. But in order for the banks to get three per cent money through the federal reserve system the banks must loan to the farmers at a rate not higher than six per cent. And if any commissions were charged over and above the interest, the interest and commissions added together must not exceed six per cent per annum.

I think this is the first instance in the history of the country of any act of the National Government for the purpose of giving the farmers cheaper money. And it works, too, as the above advertisements from the Gadsden paper and many other advertisements, especially in papers published in the cotton regions, abundantly show.

The Federal Reserve Board simply offered the banks the three-per-cent money to be loaned out at not more than six, but it made no effort to force the arrangement on the regional banks. Not all the regional banks have at this time put the order in force. Philadelphia, Richmond, Atlanta, Dallas, and St. Louis have it in force in their regions. Some of the others may act before this is printed.

Mr. John H. Rich, federal reserve agent of the Minneapolis regional bank, wrote to Secretary McAdoo on September 13th, saying: "At this time the Northwest is amply supplied with funds,

HARD ON CHILDREN

When Teacher Has Coffee Habit.

"Best is best, and best will ever live." When a person feels this way about Postum they are glad to give testimony for the benefit of others.

A school teacher down in Miss. says: "I had been a coffee drinker since my childhood, and the last few years it had injured me seriously."

"One cup of coffee taken at breakfast would cause me to become so nervous that I could scarcely go through with the day's duties, and this nervousness was often accompanied by deep depression of spirits and heart palpitation."

"I am a teacher by profession, and when under the influence of coffee had to struggle against crossness when in the school room."

"When talking this over with my physician, he suggested that I try Postum, so I purchased a package and made it carefully according to directions; found it excellent of flavour, and nourishing."

"In a short time I noticed very gratifying effects. My nervousness disappeared, I was not irritated by my pupils, life seemed full of sunshine, and my heart troubled me no longer."

"I attribute my change in health and spirits to Postum alone."

Name given by Postum Co., Battle Creek, Mich.

Postum comes in two forms:

Postum Cereal—the original form—must be well boiled. 15c and 25c packages.

Instant Postum—a soluble powder—dissolves quickly in a cup of hot water, and, with cream and sugar, makes a delicious beverage instantly. 30c and 50c tins.

Both kinds are equally delicious and cost about the same per cup.

"There's a Reason" for Postum.

—sold by Grocers.

Quaker City Feed Mills

Grind corn and cobs, feed, table meal and alfalfa. On the market 49 years. Hand and power. 23 styles. \$3.50 to \$40. FREE TRIAL. Write for catalog and farm machinery bargain book.

THE A. W. STRAUB CO.
Dept. 32735 Filbert St., Philadelphia, Pa.
Dept. X3703 S. Ashland Ave., Chicago, Ill.

4 CARRIAGE WHEELS FREIGHT PAID **\$8.75**

With Rubber Tires, \$16.00; Tops, \$6.50; Shafts, \$2.10; Repair Wheels, \$5.95; Axles, \$2.00; Ford Tops, \$21.95; Wagon Umbrella Free. Buy direct. Ask for catalog 7. SPLIT HICKORY WHEEL CO. 507 F St. Cincinnati, O.

ORNAMENTAL FENCE

40 designs—all steel. Handsome, costs less than wood, more durable. We can save you money. Write for free catalog and a special price.

KOKOMO FENCE MACH. CO.
427 North St., Kokomo, Ind.

THE GENUINE SMITH STUMP PULLERS

W. SMITH GRUBBER CO.
CATALOG FREE-DEPT. 30 LA CRESCENT, MINN.

4 Empire STEEL Wheels 75c

that's the cost per year on basis of service. They last 20 to 25 years. Average expense \$13. Save labor, time, horses, road, money. Put a set on your wagon at our risk. Write for catalog and prices.

Empire Mfg. Co., Box 988, Quincy, Ill.

KITSELMAN FENCE

Get it From the Factory Direct

Made of KITSELMAN Open Hearth wire, heavily galvanized—a rust resisting fence—HORSE-HIGH, BULL-STRONG, PIG-TIGHT Sold direct to the Farmer at 25 CENTS A ROD

Our big free Catalog of fence bargains shows 100 styles and heights of Farm, Poultry and Lawn Fence at money saving prices. It tells how we make wire, why it's better, why it lasts longer and why Kitseلمان Fence is the most economical fence to buy. Let us convince you of these facts. Write today.

KITSELMAN BROS. Box 271 Muncie, Ind.

DON'T Pay Two PRICES
HOOSIER Stoves Ranges FREE

To try in your own home for 30 days. Show your friends. Freight paid by us. Send it back at our expense if you do not want to keep it. You can get the best of actual factory prices. Are heavily made of the highest grade selected material, beautiful ornamentation and finish, with improvements that absolutely surpass anything ever produced. The Best in the World. Guaranteed for Years by a Two Million Dollar Bond. You can save enough on a single Hoosier Stove to buy your winter's fuel. All HOOSIER STOVES Guaranteed for years. Send Postal today for Large Free Catalog "and prices." Large assortment to select from. No obligations.

HOOSIER STOVE CO.,
126 State St., Marion, Ind.

BUY A FARM
in the
NATION'S GARDEN SPOT
VIRGINIA, North and South CAROLINA
GEORGIA, ALABAMA and FLORIDA

Land is reasonably cheap, and soil and climate just right for gardening, fruit growing, poultry, live stock, dairying and general farming.

ATLANTIC COAST LINE RAILROAD

Information and descriptive literature free.

G.A. Cardwell, Desk B Wilbur McCoy, Desk B
A. & I. Agent, A. & I. Agent,
Wilmington, N. C. Jacksonville, Fla.

and rates for money are very low." This must mean that our Northwestern farmers are getting the six-per-cent rate from their Northwestern banks. No bank will pay even three per cent for money to loan to farmers when it can loan its own money.

The same conditions seem to exist in the Kansas City region; and I assume that those FARM AND FIRESIDE readers in the Southwest who have been paying such high rates in past years are now getting six-per-cent money from their banks if they present "warehouse receipts covering readily marketable, staple farm products" like cotton, wheat, kafir, and milo, and ask for it. On September 13th Mr. Asa E. Ramsey, federal reserve agent at Kansas City, wrote Secretary McAdoo: "Our district has been full of money, so to speak, and while the demand is increasing now, I do not think it will reach the point where we will be unable to handle it with our own resources."

The regional banks at Boston, Chicago, New York, and San Francisco seem to be similarly favored by conditions of easy money, for they have not put the new ruling into effect at this writing.

To the farmers it makes no difference whether they get money through the federal reserve system or from their own local money supply. The thing which interests them is that anywhere in the United States three-per-cent money is available on such warehouse receipts as I have described for the banks to loan to them at six.

I should think that this arrangement would be of great interest to the co-operative elevator men and other farmers of the grain-growing regions. In some places it may be that the local banks have not put the rate into effect, but I have no doubt they will be glad to do so if the farmers show them a demand for it. In most of the older States the bank rate is never over six per cent anyhow. To these regions the new arrangement will make no difference with the cost of loans, but it will make loans easier to get. In the regions in which farmers have been paying eight, ten, twelve, and even twenty per cent on short-time loans, the new system should prove a godsend.

Not all our products come under the description of "staple, readily marketable, and non-perishable"—I forgot for the moment about the "non-perishable" part. All kinds of grain do, and so does baled hay. Cotton clearly does. So do canned goods. But how about potatoes? I don't think that has been decided. Apples in cold storage should come in, I should think, and tobacco in warehouses. Eggs? I should think so in season; but not many farmers have any interest in eggs in storage. The same thing is true of cured and salted meats. If we killed our own meats in co-operative packing houses, as the Danes do, we could get six-per-cent money on them.

Now if the Federal Reserve Board will take similar action with reference to feeding-stock paper, the live-stock industry will be benefited. Why not?

The Headwork Shop

Bucket Holds Grain Bag



TO ALL persons who handle grain I recommend this. Take an old bottomless bucket, hold it upside down, and slip on a hoop which is one inch less in diameter than the large end of the bucket. Then hang the bucket bottom side up by two strong wires fastened to the ceiling.

Put the mouth of the bag over the bucket, push down the loose wire hoop, and then pull down on the bag. The more grain you put in the more securely the hoop holds the sack. Raise the sack to loosen the hoop.

BERT CULBERTSON.

Moving a Heavy Stove

WE HAD a heavy sitting-room base burner to move, and help was short. A practical sort of a fellow happened along just at the right time.

"Let me show you how to do that," he said after we had laid our dilemma before him. "Got an old broom?"

Now if there is anything we are usually long on it is old brooms, and it did not take us long to find one.

"Let's take the legs out," was the next command. These out, the stove was let down on the old broom, placed brush end down. "Now you steady the stove." The next moment away the stove went, the handy man pulling on the broom handle and a couple of us keeping the balance. If there is a carpet on the floor, a board may be put down to draw the stove on. This will work with any heavy article that is to be moved. E. L. VINCENT.

This Barrow Expands



TAKE an ordinary wheelbarrow with a flat bed and straight front. Then make two sides and hinge them at the bottom of the bed of the barrow. At the front set pieces of sheet metal cut in the form of a quarter circle (see sketch). Drill holes in the sheet metal near the curving edge and also corresponding holes in the stationary front of the wheelbarrow. The sides may be set at any angle and a peg inserted to hold them in position.

Much larger loads of straw, silage, manure, or anything not too heavy may be hauled in this barrow. To unload, remove the pegs from either side. This lets down the side and you can slide the load off.

ERNEST TRIPLET.

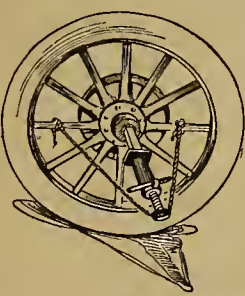
Gate for Careless Folks

ON MANY farms certain parts are so often traveled by foot passengers that gates are carelessly left open or, at least unlatched. This often results in serious damage by stock getting in or out.



In such places it is a great advantage to securely fasten the large gate and place alongside a gate for foot passengers, constructed as shown in the sketch. This gate cannot possibly be left open. It may be called "the gate that is always open and always shut." DAVID BUFFUM.

Wheel Removal on Road



IT SOMETIMES becomes necessary to remove a rear wheel when you are on the road. Usually, in the late model cars, these wheels are fitted upon tapered axles and are hard to take off.

Of course all garages have wheel pullers, and such removals are very easy; but on the road this is quite another story. However, the ordinary jack can be used for the same purpose if applied as shown in the sketch. W. V. REUMA.

Oats Help Run Engine

I KEEP my batteries dry and free from frost by having the box containing them filled with dry oats. Wheat bran, cut straw, chaff, or even dry sawdust will answer the same purpose and lengthen the life of the batteries.

E. F. KORTKE.

"The Smoothest Swindle"

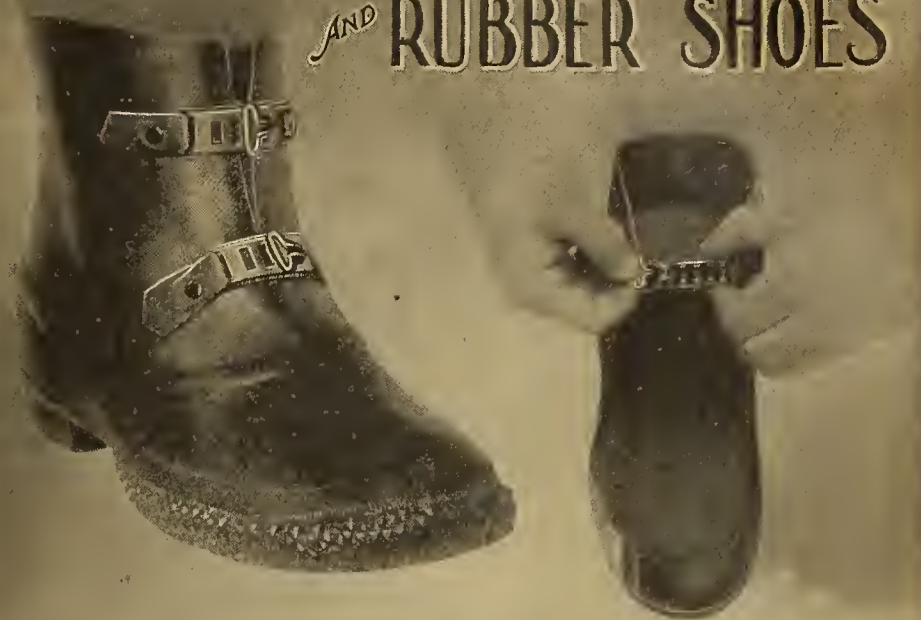
The Next Contest

WERE you ever swindled? No, that's a foolish question. I guess we all have been—at least, out of small amounts. What we want to know is the time you were swindled good and hard. Or if you know of someone else who was "touched" harder, tell us about that.

We will sign only your initials; or, if you prefer, we'll leave even those off. Let's hear from those who've seen lots of the world. Tell about how the "hoss" trader took you in, or how the "traveling" doctor "sold" you worthless treatments, or the "music teacher" worked you for lessons that didn't teach. Address The Contest Editor, FARM AND FIRESIDE, Springfield, Ohio, and mail your contribution before December 4, 1915.

For the best letter we shall pay \$5 as first prize. We shall pay \$3 for second prize, and \$1 for all other contributions used.

NEW SURE-LOCK BUCKLE for ARCTICS AND RUBBER SHOES



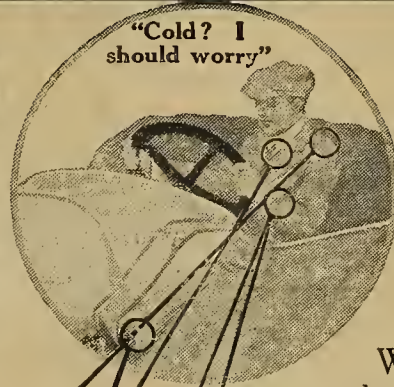
FOR many years rubber overshoes have been fastened with a buckle whose main feature was a hinged tongue, held in place by a spring. This spring did not always work, and the tongue, catching on the clothing or in brush, opened, thus unfastening the overshoe. The new patented "Sure-Lock" buckle here shown is more direct in its action, more secure, and has no part to catch and fly open. The pictures show the simplicity of action. The wire handle is grasped, the buckle placed over the slot desired, and a pressure of the finger on the handle securely fastens it.

The two last pictures show the unfastening. Simply raise the wire handle, and the shoe is undone. They are being largely used on overshoes this year.



Guarantee

We guarantee Hanes Underwear absolutely — every thread, stitch and button. We further guarantee to return your money or give you a new garment if any seam breaks on any piece of Hanes Underwear.



Save Half Your Underwear Money — Look at these Extras!

Why pay one cent more, when you can buy this soft, smooth, fleecy-warm winter underwear at only 50c a garment or \$1.00 per union suit? This is great stuff, men! Substantial heavy-weight underwear—the kind that will keep the body heat in and the cold winter air out. Look at these extras—and not a penny extra for you to pay. Read them all, then go and see the Hanes dealer in your town and lay in a good winter supply of

50c per Garment **HANES** \$1.00 per Union Suit

ELASTIC KNIT UNDERWEAR

Hanes Union Suits have a closed crotch, pearl buttons, an elastic shoulder with improved lap seam which keeps the sleeve in place and affords ample room without binding. Form-fitting anklets prevent the wind whistling up your legs. Just as big value in the single garment. For instance, they have an elastic collarette that snugly fits the neck. Pearl buttons. Improved cuffs that hug the wrist and won't flare out. Staunch waistband, stoutly stitched and well finished.

This label on every garment



Buy none without it

Warning to the Trade

Any garment offered as "Hanes" is a substitute unless it bears the "Hanes" label.

And every garment and suit is sold under a positive guarantee that every Hanes seam is unbreakable. Read our guarantee above. Hanes winter underwear is sold by most dealers. If not at yours, write us.

P. H. HANES KNITTING CO., Winston-Salem, N. C.

FARM and FIRESIDE

THE NATIONAL FARM PAPER

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HERBERT QUICK, Editor

October 23, 1915

An Irreparable Loss

ON SEPTEMBER 10th there died a great man, whose passing away is an irreparable loss to the farmers of America. Joseph E. Wing was known to us all as "Joe." He had a place in the trust and affection of American farmers which nobody can fill. He was a good farmer. He was a writer of fine, simple, clear, and intelligent prose. But it was not as a farmer nor as a writer that he won his unique place in the hearts of the farmers of this country. He was a wonderful man. If he had a fault the writer never suspected it, and he knew him well. He was a just man, and a loving one. His spirit flowed in between the lines of everything he wrote, and made it poetry; and it echoed in the overtones of everything he spoke, and made it prophecy. He strove all his life with a sweet and gentle urgency for better things for us all. He was a spiritual force. We shall not look upon his like again; but his life should be studied by every farm boy as a model in rural living, and as a proof that the man who does his work as well as Joseph E. Wing did his farming, his writing, and his speaking, may confidently expect a measure of success in rural work as great and beneficent as can be hoped for in any avenue of human activity.

Let Us Reason Together

MOST of us realize that our hardest problem is that of finding markets for what we produce at prices which will yield us a profit.

Most of us will also admit that we cannot solve this problem individually. In some minds the word "co-operation" arouses antagonism because it is associated with past failures or political notions which seem visionary, or because of the feeling that an attempt at co-operation would end in failure.

At a meeting in an Eastern State, called to organize a co-operative association, a speaker held forth on the necessity of the fraternal spirit and of hanging together. "If that's what you have to have," said an old resident, "we might as well quit now. We've always fit each other in this neighborhood, and we always will."

There's a good deal of cynical common sense in what the old farmer said, and that is what makes the marketing problem doubly hard. We all must own up, however, to the fact that wherever co-operation has had a fair chance, and has become a permanent thing, the marketing problem has been so handled that the co-operators have made money out of it.

Why have we always "fit" in so many neighborhoods? Is it not because we don't meet often enough? Standoffishness comes from not getting together. A good neighborhood church is often the nucleus of a successful co-operative organization. So is a live rural school in which the teaching is related to life. Anything that builds up sociability and affords a reason for frequent meetings helps to get rid of the disposition to keep away from each other.

The man who desires to build up the co-operative spirit in his neighborhood should be willing to make haste slowly. He may well assist in anything and everything that makes for meetings and discussions, no matter whether these things relate to co-operation under that name or not. Picnics, road-draggings, barn-raising, political meetings, church festivals, school exhibitions, corn-huskings—all these lead up to a larger neighborhood life, and the end of the time when anyone can say, "We have always fit in this neighborhood, and we always will."

Speed for Our Mails

DURING a Congressional hearing two or three years ago a witness brought down on himself some ridicule by asserting that the airship is likely to be used some day for transporting the mails. But it is now seriously proposed that on certain routes between offices separated by mountains or broad waters the aeroplane be used for the purpose of saving time in the carrying of the mails.

With the coming of good roads there can be no doubt that the motor car will



Speed routes have not yet been put into effect here, but they are coming. In the meantime Farm and Fireside reaches every nook and cranny of this country just the same. Every county gets its copies. This Texas mail carrier reads Farm and Fireside each issue. Of course he is the first one on his route to get the paper

take the place of the horse and buggy on the R. F. D. routes. The beginnings in this direction are already very numerous.

Speed is more important on many routes than the ability to carry weight.

The light motor-driven vehicle must have the preference in serving rural routes wherever the roads are so nearly perfect that they can be depended upon to be passable every day. The motorcycle must occur to us when this matter is considered. It is swifter than any other carriage except the airship. It is cheap. It will carry more weight than many rural carriers must bear. Moreover, it is legal.

Postmaster-General Burleson has authorized the use on rural mail routes of motorcycles with side cars. With the creation of good roads, gasoline and wheels will place us who live on farms rather remote from town almost as close to the post-office as are those with offices in the tops of skyscrapers in the city.

Catching Chicken Snakes

A TEXAS man catches chicken snakes by leaving one door of the coop open, putting across that a board with a snake-size hole through it, and an egg on each side of the board. The snake swallows one egg outside the board and the other inside, and can't get either in or out while containing the eggs.

Looks like a mean trick, doesn't it?

"Trying the New Things"

AN OHIO contributor who has been testing a new crop alludes to the fact that many farmers are afraid of being laughed at by their neighbors "for trying new things." It is too bad if true.

How can a sensible person laugh at a man for trying new things, especially in farming? Scarcely a variety of any field crop is now generally grown which is not different from the ones grown fifty years ago. All these were new things, once, and somebody had to try them. Not to try them until somebody else has succeeded is like learning to swim without going near the water.

Every farmer should have a small patch of ground dedicated to the business of trying new things. Somebody tried the tomato and found the new thing good, though before that it was regarded as poisonous. Somebody tried setting the twig of one tree in a cleft of another, and grafting came into use.

Somebody has first tried every new thing since the birth of man—and the one who tries is not the foolish person, but the one who laughs at him.

stock from the South means a bigger supply in the competition of the market.

The cattle tick is being extirpated.

The hills and mountains of the South contain great areas of the best of grass land.

No great change takes place rapidly in the farming world.

When the late Doctor Knapp began educating the farmers of the South in corn-growing, he attacked a problem which seemed hopeless, but thoughts do finally produce effects.

Corn-growing in all the cotton States is a great new factor in farm life—as great perhaps as the opening up of the prairies sixty years ago. And that upset agriculture all over the world.

Our Letter Box

Good Word from Nevada

DEAR EDITOR: I wrote you my appreciation of "The Brown Mouse" some time ago; am ordering one for a present for our school library, as I believe it is written along the right lines, and what a child learns it retains through life. We have no children, but others have.

Now in defense of sweet or bee clover will say that in this country alfalfa is a more productive forage plant, so sweet clover isn't cultivated; but where it stands in waste places or is let grow in fields I consider it the greatest soil builder of any plant I know, and bees work on it a great deal, and I think it is what gives our honey its delicious flavor. I don't believe Nevada honey can be excelled.

In regard to doctors will say I believe in a state or county tax, or have the rural population co-operate and pay a tax each month, the same as railroad employees do. I believe either one would be much better than our present way in every respect; cheaper for medical attention and safer and more comfortable for the patient. H. E. ORDWAY, Nevada.

Pay Doctors' Bills as Taxes

EDITOR FARM AND FIRESIDE: I enjoy reading FARM AND FIRESIDE. We have been "listening" with interest to the discussion of doctors' bills. I'd like to tell "you-all" how the problem is solved in this section of Florida.

Through this section there are located several large mills and large turpentine stills. The general business is all owned and controlled by large-lumber companies that employ hundreds of men, both black and white. Now, the company that employs the men holds back every month \$1.50 from each married man and \$1 from each single man, for insurance and doctor bill. Then the company hires a physician on a salary to look after their men. It is this doctor's business to treat all cases, whatever comes or goes, for the families of these men, and to supply drugs, etc., just as if the man himself paid the bill.

Why couldn't farmers organize a "doctor's club" and subscribe a certain sum each month to hire some able physician to keep them well? So long as we all wait until we are sick and then call the doctor, just that long will we battle with disease. MRS. E. A. MANERS, Florida.

Farmers Who Never Work

DEAR EDITOR: Apropos of that editorial on "college farmers," it has been a source of great disgust to me while at college to find that my classmates, most of them, looked upon farming as a beautiful life where headwork would surely bring in heaps of coin, with little or no hard physical work.

One fellow in particular had this view of the work. One day our class in horticulture was planting strawberry plants. The day was a bit rainy and the ground muddy. This man got his hands dirty. On our way from the work he remarked to me: "Nasty, dirty work! Ugh!"

"Why," I said, "you'll have to get used to that if you ever become a farmer!" A look of strange incredulity passed over his face as he replied loftily: "Oh, no, I'll have somebody else do that."

And when I remarked that to be a true farmer one must get into the work himself, he looked at me in open-mouthed astonishment.

This brand of "farmer" is getting too common, and I believe that it is the means of swelling so greatly the registration at our agricultural colleges—the city-bred boy, with city-bred tastes, taking up "agriculture" because it is getting to be a fad. Let them, and the "profs" too, get out and get a few blisters and backaches to mix with the unadulterated book stuff.

PHILIP MARSH, New Hampshire.

EW

Not Much Certified Milk

ALTHOUGH certified milk has been produced for twenty-two years, its sales are much less than one per cent of the entire milk supply. The public seems unwilling to pay the extra price for certified milk, and scientists are now declaring that certified milk is not perfectly safe.

Several milk-borne epidemics have been traced to farms where certified or inspected milk was produced, whereas only one epidemic has been traced to Pasteurized milk, and that one was shown clearly to be caused by the use of improper temperature.

The certified-milk business thus seems to have been shorn of financial and even philanthropic attractions.

South Turns to Corn

THE corn crop of the South is big this year. Its bigness, however, would not greatly impress the corn growers of the corn belt were it not for the fact that it is growing so astonishingly. Outside of Florida and South Carolina the U. S. D. A. estimates that the Southern States will produce 778,500,000 bushels this year. This is 176,000,000 bushels more than last year, and 250,000,000 more than the average of the last five years.

Corn produced in surplus means live stock—hogs, cattle, and sheep. Live



Farm Notes

Can You Drive Slowly?

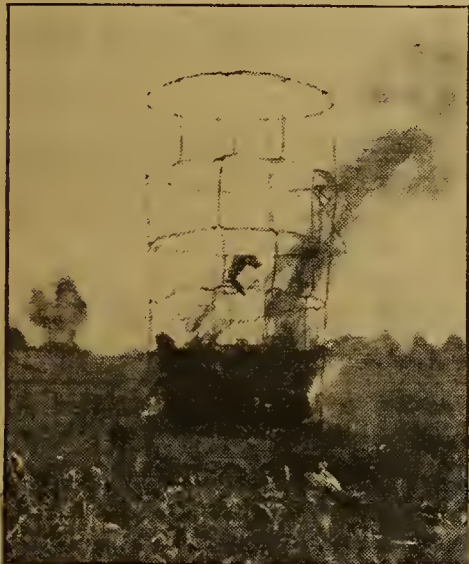
AN EXPERIENCED automobile manufacturer says: "It requires more brains to learn to drive slowly and carefully than to drive fast and foolishly. The most famous automobile drivers in the world, when off the race track, are slow and careful drivers. They don't take chances. Let your first lesson be that of learning to drive safely."

"If you want to save your tires and your car, learn to stop without jamming on the brakes and sliding the wheels. Take a lesson from the way a locomotive engineer gradually stops his train. Average careful driving of a motor car will add from 25 to 50 per cent of its service over careless driving."

Use for Surplus Fencing

By Carlton F. Fisher

IHAD about half a rod of woven-wire fencing left over from a line fence. This I turned to excellent use by making from it a trash burner. I simply made it into a cylinder two feet in diameter, and as the fencing was four feet high the proportions were about right. A



foot from the bottom I inserted a small piece of the same wire horizontally, to make the grate.

This trash burner is excellent for burning paper and trash. Even garbage will burn if there is enough trash to dry and ignite it. To fasten the wire securely I drove several two-inch square stakes into the ground all the way so as not to burn. Then I stapled the bottom wire to the stakes.

Dark Ages Farming

THE writer once heard a woman call a spotted bird a "pieded" bird. She was a backwoods woman who got her speech from hearing it, and not from reading. The word "pieded" is the old English word "pied," now seldom seen outside of poetry.

How much of our farming do we get from our ancestors in the same way? Very much of it. When the live stock ran at large the animals' instincts led them to balance their rations, just as Professor Evvard found they still do in the feed yard if given a chance. They sought out legumes for protein. They sought seeds and roots for carbohydrates, and their owners never needed to think much of a balanced ration.

The old-fashioned man who sneers at the people who talk of a balanced ration is living back in the dark ages of farming. He should realize as a sensible man that when he shuts stock up in pens and sheds and stalls and feeds them himself, he ought to study out the sort of ration they would gather for themselves if they had a chance.

In olden times, competition was not so sharp as now, nor land so high in price. It made little difference whether the live stock made the fastest possible gains or not. Said the Arkansas man when told by a book farmer that his hogs would grow faster if he fed them corn instead of letting them rustle for mast in the woods, "Well, maybe, stranger; but what's a hawg's time wuth, anyhow?" He was right, too. When hogs or other stock are grown by such patriarchal methods their time isn't worth much, and they can wait. But not many of us are farming that way. We want the

last pound of gain per month, and if we don't get it we fall behind. We can all join in the verdict that science and common sense and experience are at one in this matter.

Our inherited ideas are wrong just so far as conditions have changed since our ancestors adopted their good old rules.

Judging Bread and Cake

By Harry M. Ziegler

WHILE the proof of the pudding may be in the eating, the judges at the Kansas Free Fair, held recently at Topeka, used their fingers and their eyes in testing the food exhibits.

"In judging bread, its outside appearance—color of the crust, the surface, and its shape—is first considered," said Frances L. Brown, director of the home economics department of the extension division of the Kansas State Agricultural College, who was one of the judges. "The first point in judging the inside of the loaf is its thoroughness of baking. Then we pass to the appearance of the crumb."

"The loaf must be porous and spongy," explained Miss Brown, "and the pores in the ideal loaf must be very fine and of the same size. The crust should not be thick, and the feel of the bread as you draw your fingers across the surface should be smooth and velvety and without leaving a path of crumbs after your finger. Its color should be creamy-white on the inside, and its taste, which is the most important item, should be sweet and nutty. This sweetness does not refer to the amount of sugar put into the bread but rather to the natural constituents of the bread."

"In judging cake, the classes were divided into butter, sponge, and fruit cakes, according to their kinds. Then these kinds were subdivided into layer and loaf cakes, but in each case the batter or dough of the cake itself determines the class to which it belongs, rather than the filling or frosting. For instance, a chocolate cake is one having chocolate in the batter. It is wrong to speak of a coconut layer cake when the cake in question is a layer cake with coconut filling or frosting. Often excellent cakes do not receive recognition because they have been entered wrongly."

"Similar points are considered in judging cakes as are used in judging bread, though tenderness and lightness are more important than fineness and evenness. It should be remembered that when cakes are frosted the frosting is a part of the cake and should remain upon the slices when the cake is cut."

The Poor Voter

On Election Day

THE proudest now is but my peer,
The highest not more high;
To-day, of all the weary year,
A king of men am I.
To-day, alike are great and small,
The nameless and the known;
My palace is the people's hall,
The ballot box my throne!

Who serves to-day upon the list
Beside the served shall stand;
Alike the brown and wrinkled fist,
The gloved and dainty hand!
The rich is level with the poor,
The weak is strong to-day;
And sleekest broadcloth counts no more
Than homespun frock of gray.

To-day let pomp and vain pretense
My stubborn right abide;
I set a plain man's common sense
Against the pedant's pride.
To-day shall simple manhood try
The strength of gold and land;
The wide world has not wealth to buy
The power in my right hand!

While there's a grief to seek redress,
Or balance to adjust,
Where weighs our living manhood less
Than Mammon's vilest dust,—
While there's a right to need my vote,
A wrong to sweep away,
Up, clouded knee and ragged coat!
A man's a man to-day!

JOHN GREENLEAF WHITTIER.

Three Lost Persons

JOHN ROBERT BERCAW and Stephen Bercaw have been lost people for forty years. We have no description of them and the following is the only clue:

Their father, whose name was Henry Bercaw, served in the Civil War from 1861 to the close. Their mother was Mary Bercaw. John Robert Bercaw is now about forty-five years old, and Stephen about forty-two. If they are still living or if any of their family can give information concerning them, friends in Indiana will greatly appreciate it.

JOHN R. TITUS, about 5 feet 6 or 7 inches tall, was last heard from in July, 1882, at Larimore, North Dakota, where he was just about proving up a homestead claim. Any news of him will be appreciated by his brother, Joseph Titus.

WINCHESTER

CARTRIDGES

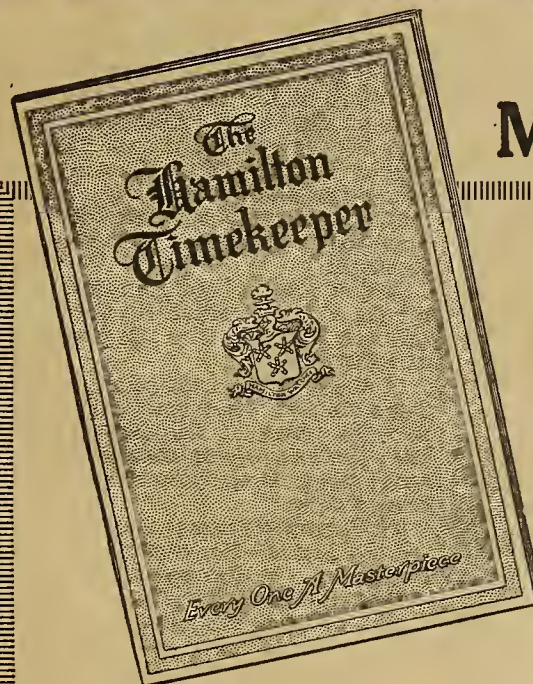
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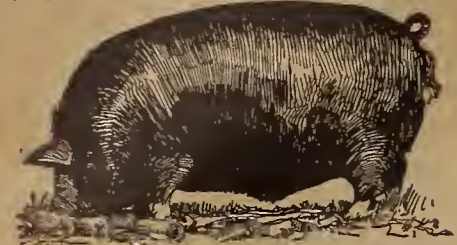
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You can make such a record with your hogs if you will cook the feed you are now giving them raw in a

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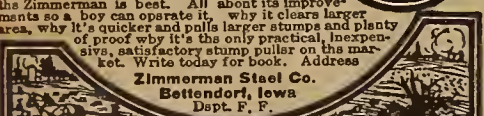
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Live Stock—Dairy

Cholera "Cures" Fail

THE veterinary department of the Iowa Station has completed a series of tests on so-called hog-cholera cures. Among the remedies tested were: Cholera Immune U. S. Specific; American Specific No. 2; Co-Vac-O; No. 544 Curative; No. 544 Immunizing; De Vaux Cholera Antitoxin; Dr. D. W. Nolan's Anti-Hog Cholera Specific (Noxine).

These products were administered exactly as recommended by the manufacturers, but in every case all of the pigs died.

In commenting on the remedies, Dr. C. H. Stange says: "Up to the present time no product has been found that will cure hogs affected with cholera, and the only product so far as known that will immunize the hog against cholera is anti-hog-cholera serum. It is realized that the present method of producing serum is very expensive, therefore the experiment station is not opposed to a more simple and economical method of combating hog cholera, and such a method will be welcomed when it appears."

In other words, you can't cure or prevent cholera with a patent remedy. Serum is the safest and the only officially recognized method.

Breeding-Sow Wisdom

PEOPLE will tell you that a brood sow should not be too fat at farrowing time. That's true; but that doesn't mean that she should be starved to a shadow. She should be fed a good, hearty ration, strong in protein, and not rich in the fat-making foods. She should have plenty of exercise. She should be in that thrifty condition which makes her as strong as a bull—but not fat.

There's no danger of her having too much bone and muscle. The heavier she is the better—provided that too much of her weight is not fat. An all-corn ration robs her of the strength she will need at the time of her trial, and fills the cavities of the body with fat. Then she will be fat and lazy and will kill her pigs by lying on them. Or she may never be able to bring them forth. Or her appetite for bone and muscle forming foods may be so abnormal that she may eat them up.

But if she is kept from being too fat by the simple method of starvation, she will not give the litter the proper amount of milk.

If the sow becomes constipated before farrowing, as some sows do, epsom salts may be given in the slop for three or four feedings—just enough so that the taste will not repel the sow and keep her from eating.

At farrowing time occur the most of the pig losses. Some of them come from the absence of the owner when the pigs arrive, and some from his presence. The sow should be carefully watched, but she should not be disturbed. In other words, no dogs should be allowed anywhere near, and she should not become aware of the presence of those who watch her. A good brood sow stealing her nest in the grove or fields will on the average bring to the feed trough a better litter than the one which is fussed over by a solicitous owner. Yet she sometimes needs help. Combine the merits of the two methods.

Garget in Cows

MOST of us are familiar with the inflamed, lumpy condition of the cow's udder, which gives us lumpy milk and an ailing cow. It is called garget, or mammitis. It is a serious ailment.

Gargety milk is unfit for use, and should be carefully thrown away. It is asserted by those who ought to know that it may cause severe sore throats in people using the milk, and especially in infants. Moreover, it is unclean and diseased.

Some stockmen think that the best manner of handling cases of garget is to give the cow good ordinary care, and let her get well of her own accord—which she will ordinarily do in about a week's time. She will, however, be found to have fallen off in her milk yield.

The best judges, however, recommend that the grain ration be cut down to a third the regular feed, and that she be

fed a juicy and easily digested ration. Give also, as soon as the garget is noticed, a pound and a half of epsom salts as a cathartic. Bathe the udder for at least twenty minutes three times a day with hot water, and after this is dried off the skin and the surrounding hair, rub thoroughly with warm olive oil containing three per cent of gum camphor. Between these treatments keep the udder poulticed with warm poultices of something like bran, oatmeal, linseed meal, or bread and milk.

Milk the cow at least three times a day. It is better to do this carefully by hand if possible, rather than use the teat siphon. If pus forms in the udder it must be drawn off—and this is a good time to call in a good veterinarian.

Where these remedial measures are resorted to early in the disease, the cow will usually recover.

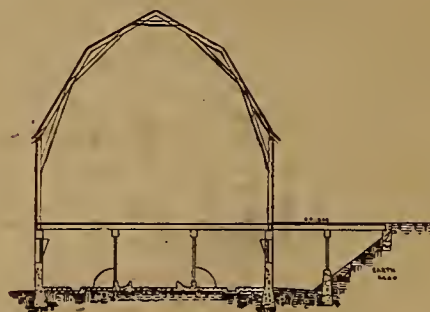
Prevention is better than cure, and prevention is mostly a matter of cleanliness and humane treatment. The litter about the cows in stable or yards should be clean, and occasionally disinfected. The hands of the milker and the udders of the cows should always be kept absolutely clean, and if the disease appears, great care should be taken to wash and disinfect both hands and udder after the affected cow is milked.

To prevent garget, see that no kicks and blows are bestowed on the cows; milk them regularly, and often enough to prevent too great pressure when a great flow of milk is yielded; don't hurry the cows when their udders are overfull; keep them from exposure to cold and wet, and keep them vigorous.

Bank Barn O. K.

THE bank barn is mighty convenient because of the easy access to the second story with hay, fodder, and machinery. But a good many bank barns are miserably dark and damp.

R. E. Hundertmark, a Washington State dairyman, solves the problem in the way illustrated. Simply excavate the earth on the side toward the bank and put in a short bridge. Then install plenty of windows in the side toward the bank as well as in the other side if there are not already enough. The space in glass on all sides should be at least one tenth of the floor space.



Another cause of dampness and cold in a dairy barn is the lack of drainage around it. A few lines of tile to carry off surface water, and eave troughs to turn the rain water into the tiles, will help in keeping the barnyard dry and the cows clean.

Personal Habits Count

By Mark Sabin

NOT always can one farmer tell why he gets low prices on something for which another man gets high prices. This fall, however, I had an experience which taught me a lesson and leads me to write this letter.

I had been putting on the roof to my new tool shed. The lumber for this shed, with the exception of the shingles, came from an old barn that we had torn down. The boards were dirty, and as a result I was dirty too. At noon I learned of a man in town who wanted to buy several horses for his livery stable. I had one to sell. He had seen the horse many times. To save time I jumped in my car and drove in just as fast as I could. I made the sale—got \$85. That was not as much as I thought I ought to have, but I did not need the mare any longer and so sold at that price. After I left the stables I found that a neighbor of mine, only three miles from my place, sold one of his horses for \$110. I knew the horses were much the same. There ought not to have been that difference in price. What made it?

As I went on down the street I met a friend of mine who has recently taken to drinking. He had been out on a "toot," evidently. Dirty from head to foot. I thought to myself, "What chance is there for him holding down a job?" And then in a flash I thought of my own dirty clothes.

I took my medicine, as I thought that at least a part of the low sale price was due to my seeming slovenliness.

How easy it is for one to grow careless about his personal appearance. It may be a broken shoe lace, a spotty coat, or,



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ON ALL LIVE STOCK
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with the women, an untidy dress. And then pretty quickly, if these little things are allowed to go uncorrected, more serious carelessness follows. Not changing the clothes at proper times, infrequent bathing, and a general letting down of our appearance are sure to be harmful in many ways. After my experience I have come to believe that the first requisite is cleanliness. It's next to godliness. Then neatness of clothing; not only the outer clothing, but the underwear too. If I begin anywhere to save on these things, I'll begin on neckties and the like. I'll not skimp on the real necessities. A good pair of suspenders and of garters are as essential for a young man's neat appearance as a trim belt is for a girl's. Are you properly equipped for a clean and comfortable winter? I am—now.



A Potashless Season

AMERICA bids fair to do without potash in her commercial fertilizers in 1916. The war influence has boosted potash prices from around the \$60-per-ton mark to \$250 per ton for muriate and \$225 per ton for sulphate of potash, without much potash in sight even at these prices.

The July imports this year of sulphate of potash were seventeen times less than in 1914, and thirteen times less of muriate of potash.

There is considerable talk and speculation about developing our own supply from different kinds of seaweed and from deposits that have been found in arid portions of the country. But any supply that is available and sure seems yet to be a future proposition.

Radium is Expensive

RADIUM fertilizers are being advertised. These fertilizers contain the same plant-food elements carried by the ordinary ones, and in addition a minute quantity of radium. At present prices radium is worth seventy million dollars a pound—and there is not a quarter of a pound on the market. The amount in the fertilizers is therefore so small as to be incapable of measurement, and according to experiments made by experts it cannot be shown that it does the crops a particle of good. But even a little costs money.

ABOUT one fifth of the farm land in this country is planted to corn each year, and the United States produces twice as much corn as all other countries put together.

ASSESSED land values in the Imperial Valley, California, rose from nothing at all in 1902 to \$27,000,000 in 1915. And the population from 50 to 50,000. All because of irrigation.

World's Crops Bountiful

WHEAT, rye, barley, oats, corn, and potatoes have been good crops this year in the principal countries of the world. The International Institute of Agriculture gives the following figures based on August conditions:

Spain's wheat crop is 24 per cent heavier than last year's. Great Britain's is over 22 per cent heavier. Russia's wheat crop is 33 per cent greater. Canada's is 63 per cent, and Italy's is nearly 4 per cent greater.

Taken altogether, the world's wheat crop is about 18 per cent greater than a year ago.

The figures for rye and barley are very similar to those for wheat, and the world's figures for those crops are nearly 19 per cent more than last year.

Russia has an enormous oat crop, nearly 33 per cent more than in 1914. The world's total oat crop is 24 per cent more.

The corn-crop figures are not yet ready, but from those that are in, the crop will be only slightly heavier than in 1914.

England and Wales are a little low on potatoes. The potato crop of Switzerland is 80 per cent heavier than that of a year ago, and of the United States about 6 per cent greater.

The International Institute of Agriculture is recognized by all nations as the world's official and most reliable source of figures on agriculture. Its offices are in Rome, Italy.

What's Millions to Us?

RAINS and hailstorms ruined wheat in Kansas to the extent of \$23,000,000 this year, after the first rosy forecasts as to the yield had been made. These same rains cost as much probably in their damage to other crops—especially oats, barley, and hay.

If a fire had burned up forty millions in some city it would have been newspapered abroad as a world's calamity; but this loss was suffered by the farmers, and the news and editorial writers will make little of it. They will not realize, either, that storms do not stop at state lines, and that Oklahoma, Nebraska, Missouri, and Iowa are sufferers with Kansas; and they will call the farmers confirmed grumblers when they pull a long face about losses aggregating a sum which is incalculable.

Oh, well! It has always been so, and always will be. Let it go. We shall keep on feeding them all the same.

Do You Plow Corn Deep?

NOW that the corn is mature, have you learned anything on the matter of deep cultivation as opposed to shallow cultivation? Thirteen experiment stations working for five years have found out that deep cultivation on the whole cuts down the corn yield ten bushels to the acre. Three things may make it necessary to cultivate deeply—big or numerous weeds, cold, wet, and sticky land, or the cementing together of the soil particles after heavy, driving, dashing rain.

Boys Point the Way

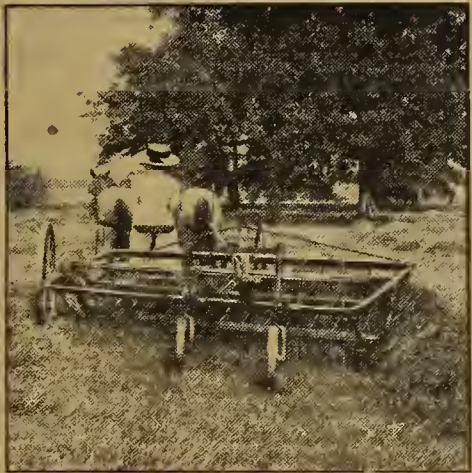
KING COTTON may well be on the anxious seat. In 1914, 3,060 Dixie boys engaged in corn-contest work gathered an average of 56.6 bushels of corn per acre, and 106 boys produced over 100 bushels of corn per acre under strict supervision of the state officials in charge.

When the fathers begin generally to adopt the intensive system of culture practiced by the boys in these contests, corn, legumes, and live-stock husbandry will begin to look good to them.

IF WORMS are found in the bottom of the haymow or stack—brown worms which spin webs—it will be well to burn the wormy hay. The pests are the clover-hay worm.

Combined Rake and Tedder

THIS side-delivery rake is one of the improved models which can also be used as a tedder. The picture shows it raking. This it does by lifting the hay and moving it gently to one side, where



it lies in a loose windrow. To use the rake as a tedder, simply move the lever. Then the teeth revolve in the opposite direction and at a greater speed, so the hay is pitched lightly into the air.

ALFALFA hay has been shipped through the Panama Canal from California. The high freights since the war has stopped the traffic, but it will be resumed. The steamships require it to be compressed to 80 cubic feet to the ton—about a third the size of an ordinary bale. The alfalfa men say that this compression doesn't hurt it.

Have You Missed Your Chance?

HAVE you taken advantage of all the opportunities presented in this issue for improving your business or your home conditions? Have you given to the advertising columns the same attention that you have given to the regular reading matter? You are missing many an opportunity if you have not. Remember, the advertisers are glad to send full information in regard to their goods, and that FARM AND FIRESIDE people are sure of getting fair treatment.



Save Those Animals!

When your animals show symptoms of uneasiness, this is the time to begin treatment.

Shivering—Difficult Breathing—Pawing
Lameness — Inflammation — Soreness

When these allied aches come, get your best "Insurance" in immediate relief against further complications by a \$1.00 investment in a remedy tested by time for all time.

Sloan's Liniment

"Penetrates to the sore spot"

Fatten your BANK ACCOUNT with PORK PRODUCTS

The outfit you need is a chopper and an **"ENTERPRISE" Sausage Stuffer and Lard Press**

Iron Cylinder Bored True
Plunger plate fits accurately, rides evenly, doesn't jam
Tin Cylinder (strainer) has wide lips for easy handling
4-qt. size, Japanned, \$5.50
Nine sizes and styles, 2- to 8-qt., Japanned or tinned

Book of information on hog raising and pork products, "How to Make Money with Hogs," by F. D. Coburn, noted swine authority, sent for 10c in stamps

"Enterprise" Meat-and-Food Chopper gives true slicing cut with four-bladed steel knife and perforated steel plate.
No. 12, chops 3 lbs. minute, \$2.25
No. 22, chops 4 lbs. minute, \$4.00

Patented Corrugated Spout keeps air from entering sausage-casing, thereby prevents spoilage

Your Dealer Can Supply You
Look for "Enterprise" on these machines
Four cents in stamps brings you our new edition cook book—"Enterprising Housekeeper"—over 200 recipes
The Enterprise Mfg. Co. of Pa.
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Save the stalks!—they're half the crop in actual feed value. The Appleton cuts or shreds the stalks; the fodder saved paying whole operating cost. First successful machine husker made; built by Appleton Standards from 43 years experience in farm machinery making. Husks cleanest, shells least; equipped with most efficient corn saver. Sizes for 4 h. p. and up gasoline engine.

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Easiest and safest to operate. Gives years of service; yet one season's income from it pays its cost. Send now for free Appleton Husker Book. Appleton Mfg. Co., 509 Fargo St., Batavia, Ill.

Avoid those colds this winter—wear

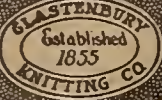
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UNDERWEAR

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FOR MEN

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Every garment shaped to the figure and **guaranteed not to shrink.**

Glastenbury Two-Piece, Flat Knit Spring-Needle Underwear is made in fifteen grades, several weights of fine wools, worsted and merino.

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Natural Gray Wool, winter weight.....	per garment	\$1.50
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Natural Gray Worsted, light weight.....	per garment	1.50
Natural Gray Australian Lamb's Wool, light weight.....	per garment	1.75
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YOU CAN BUY TUXEDO EVERYWHERE

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In Tin Humidors, 40c and 80c In Glass Humidors, 50c and 90c

THE AMERICAN TOBACCO COMPANY



In this picture the straw spreader is at work. It takes two men, one to drive and one to pitch the front part of the load to the spreader arms

From Threshers to Grinders

[CONTINUED FROM PAGE 3]

Wood versus metal construction is a point still debated, but the preference now seems to be in favor of a wood body with a metal beater. One of the most promising machines in the spreader class is the straw spreader. It has not been exploited very much, yet a good many are in use, especially in the West.

A straw spreader will get over about twenty acres a day as compared with two acres a day when straw is spread by hand with a fork. Straw spreaders cost about \$70.

The mechanism resembles that of a tedder, except that the kicking motion is sidewise. Clamps attached to one of the wagon wheels supply the power. Of course the smaller the driving wheel the faster the spreader works and the farther it scatters the straw.

A load of straw will cover about an acre when scattered with a spreader, and takes about ten minutes to unload. The reasons for spreading straw over land are important when you think of them seriously.

Straw is a direct product of the soil, and consequently contains a great deal of plant food. According to chemical analysis the fertility in a ton of straw is worth close to \$2.50. Spread on land, a straw mulch prevents freezing and thawing of winter wheat, and makes the wheat earlier in the spring. A mulch of straw also lessens soil-blowing and soil-washing. Such a mulch disked or plowed in increases the water-holding capacity of the soil and is a fair guarantee against drought.

There's another line of farm machinery which has seen few changes during the past ten years, but now they are starting. I refer to the threshing business, and to the improved, small-sized threshers in particular.

You can Thresh with Three Men

Can you imagine threshing whenever it suited you and your wife and family? Can you imagine threshing without having to wait your turn, and perhaps having several hundred bushels of grain spoil before the custom thresher gets around?

It is rather hard to imagine all those things, but when you consider the first cream separators were about two feet in diameter and did no better work than those only four inches in diameter now, the baby thresher is worth serious thought. One threshing machine now on the market will operate with a three-horsepower engine or with a tread power. Such a machine has a capacity of about 15 bushels of wheat or about 30 bushels of oats per hour. It sells for less than

\$100, and for the man who raises just a little grain for home use it seems to be a good thing. Another threshing machine, requiring five horsepower and upward to run, can be had for less than \$250, and there are several makes in that class. For clean threshing and general efficiency these small machines which three men can operate may not be able to compete with the large standard threshers, but they have other advantages to offset those objections.

Speaking of small threshers, one manufacturer says: "Would you think of having a portable sawmill with a gang of 15 or 20 men stop at your farm to saw up a few cords of wood? Then why think it is economical to have one of the large custom threshers with its big gang come to thresh out a few hundred bushels of grain?"

The cylinders on threshers requiring five horsepower are about 18 by 26 inches, and the shaft makes about a thousand revolutions per minute. The machine weighs a little less than a ton, and can be partially taken apart for storage.

Feeding the Ducks

IT IS a mistake to feed ducks the same as hens if we want the best production of eggs.

The poultryman at Clemson College, South Carolina, has secured excellent laying from ducks by feeding this mixture:

Cornmeal	50 lb
Wheat shorts	50
Cottonseed meal	15
Ground limestone (not caustic lime) .	2 1/2
Sharp gravel or sand	2
Table salt	1/2
Total	120 lb

Where the ducks do not have range so they can get plenty of green, succulent feed it is desirable to mix about ten per cent cut green or steamed alfalfa or clover hay, rape, small potatoes, turnips, or similar vegetables with the grain-mash mixture. This additional bulk adds variety to the feed and conduces to heavier laying.

The mash mixture can be profitably moistened with buttermilk or sour skim milk to a crumbly condition.

Ducks that are confined in limited quarters should be fed three times a day with this mash, and if on range, twice a day what they will clear up in about twenty minutes.

Ducks should always be watered in a drinking vessel with water sufficiently deep so that they can immerse their bills to a point above the nostrils. Otherwise they will sometimes get their nostrils plugged up with the mash mixture.



Here is a box rack equipped with a straw spreader. The straw is kicked out by the mechanism shown in the back

Good-Health Talks

A New Department for Our Readers

By DAVID E. SPAHR, M. D.

ILL HEALTH is a robber. It takes away our comfort, peace, and happiness; it restricts our usefulness, narrows our influence, and depletes our treasury.

State and county boards of health, with their divisions of medical, sanitary, and food inspection, are doing what they can; but their energies have been spent mostly in towns and cities where the most urgent need exists. Consequently country districts, especially those far from medical centers and supplies, have scarcely received proper recognition.

Most diseases spread less rapidly in rural districts than in cities; still even the most healthful locations are not immune from destructive diseases that stalk unbidden and unwelcome into our homes.

The supreme object and aim of this department of the paper will therefore be to disseminate clean, healthy medical knowledge, couched in simple terms.

Perhaps a brief personal sketch of the man to whom has come, unsolicited, the honor of conducting these columns, would be pardonable.

Born upon the farm—a rented one, by the way—I was bequeathed a goodly heritage from noble ancestors, not of wealth and estates, but something vastly more important—a sound physical body and the mental and moral strength to battle with life's difficulties. My early life was spent on the farm in hard manual labor, but later on my desire to study medicine overpowered all other inclinations.

By the strictest economy and by working at odd hours I received my medical education. Then, after graduation, I started my practice, in a cabin, at the crossroads in the backwoods of northern Ohio. Here I rode horseback over mud roads almost impassable, forded swollen streams in daylight and darkness, a prey to cold winds, rains, snows, and wild animals.

In all this we see the evolution of the physician. From the saddle to the two-wheeled gig, the cart, the buckboard, the runabout, the buggy, and the automobile.

The hard, rugged school of experience, I think, compensated somewhat for the loss of a modern scientific education. Thrown upon my own meager responsibilities, with no medical counsel near at hand, I was forced to depend on my own resources, a training that has been very beneficial in many close places since.

My life-work has been among farmers, with farmers, and for farmers. And much benefit have I received from their good advice and wise counsel. Our interests were identical; upon their health and prosperity depended my future advancement.

This statement may serve to bring the writer and readers nearer together, and I hope will make us friends.

Diseases of the Farm

To mention the diseases that might prevail upon the farm would be to enumerate the whole category of human ailments. Humanity being the same the world over, rural and urban diseases are necessarily of a like nature, the distinction being in degree rather than in kind.

Diseases, however, have their special times and seasons when they prevail. Thus, during the summer and early fall we have the bowel troubles, such as dysentery, cholera infantum, and diarrhea and intestinal troubles of children and adults, and the typhoid and milder fevers. Then with the advent of cold weather we have colds, grippe, and pneumonia.

We expect to consider all of these in their proper order.

Surely, if pure air and sunshine is of any relative value, diseases and afflictions that impair health should be exceedingly rare and of a mild type in the country. The work of the farmer is done in the open air, and is of such a varied nature that it brings every bone, muscle, nerve, and brain cell into action; thus fulfilling a natural hygienic law that demands work from every atom of

the human body. This insures a well-developed body wherein every organ performs its natural function.

Theoretically, country life should be the ideal life. Is it all it should be, or could be? If not, let us all help to attain that high ideal.

A good health maxim: "Don't over-eat, overwork, or worry." But whoever thinks of following such common advice as that?

Infected Wounds

J. W. A. of Kentucky writes: "A slight injury knocked the skin off the side of my big toe. It was such a simple injury that I did not take any care of it, and it seemed to heal up. But in a day or so my leg got stiff and sore, and now there is an abscess forming just below my knee, in the upper part of the calf of the leg. What is the cause of my trouble?"

Answer: This is a case of blood-poisoning. Germs from the sore on the foot traveled up the leg along the blood channels until they found lodgment near the knee, where an inflammation was set up that will ultimately form an abscess. Infectious wounds, although a disease not peculiar to farmers, is so common and so serious a disease that, if neglected, it may lead to the loss of the usefulness or perhaps the total loss of the limb, or even of life itself.

The farmer meets with a slight cut or scratch upon the hand or foot. He dismisses it as a trifling matter, takes absolutely no precautions, and leaves it exposed to all kinds of external irritants—the wet grass, the dirt of the barn lot, the hog pen or the stable, with no bandage or other protection from germs. Consequently, infection takes place before he even thinks of consulting his physician. The parts become badly swollen and extremely painful.

The treatment of these cases of infection consists in removing all dirt and grease from the wound. This can be accomplished speedily with a bit of cotton and coal oil. See that the wound has free drainage, and don't apply any substance that will interfere with this free drainage, such as paste or powder. Protect it lightly from all external irritants. This is often all that is necessary. If the wound should become inflamed and red streaks should radiate toward the body, send for medical aid at once.

In the meantime you might use the "Bier's Treatment," which is safe and sane. A thin rubber band or a piece of rubber tubing wound just tightly enough about the limb, well above the inflamed part, will produce the desired congestion of the veins and will not obstruct the arteries. It should be placed above the knee when the foot is involved, and above the elbow if the hand is affected. Often considerable redness and swelling occur, extending sometimes to the constricting band. Little pain or discomfort should result; in fact, the pain should be relieved.

Frequently, however, one or more abscesses may form. These will have to be opened with an absolutely sterile (clean) knife. Healing may be delayed on account of the patient's low vitality. In grave cases gangrene may add to the seriousness of the case.

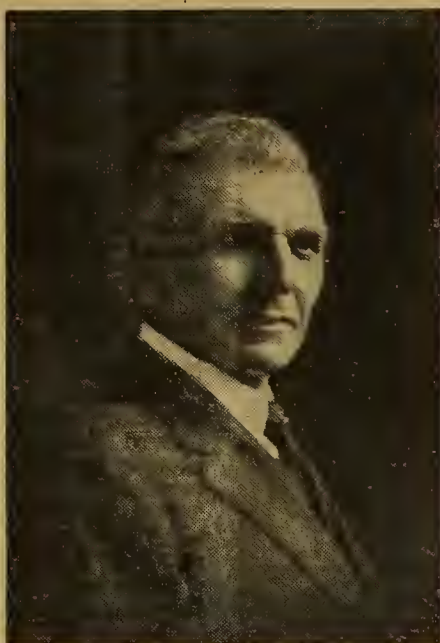
Fatigue Pains

A farmer about fifty years of age consulted me about severe pains in his ankles and feet which were worse after walking or working. He took indigestion and was laid up for a few days, and the pains left. He wanted to know the cause. They returned with renewed vigor when he went to work again.

They were evidently fatigue pains, caused by being on his feet too much.

The natural secretion or muscular juices are normally alkaline, but overstraining from standing or walking too long changes this to an acid condition, which causes pains.

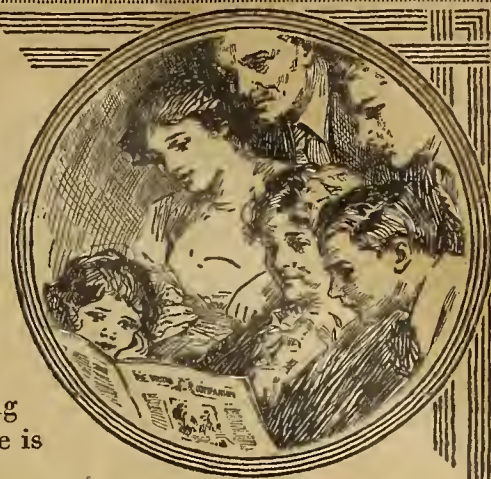
The treatment is rest, absolute rest.



Dr. David E. Spahr, who begins on this page an important department

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37x5	35.55	39.80	5.95	6.70

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The Rise of George Simmons

By CHARLES H. LERRIGO, M. D.

Chapter II—The Doctor's Big Family

IT SEEMED ridiculous. Down one day and up the next was no way for typhoid to act. And Alice had shown no special typhoid symptoms. I had had the blood test made only to be certain. As I had told John, typhoid seemed quite out of the question. But there was just one unpleasant suggestion that persisted in intruding. Could Alice be a typhoid carrier?

Everyone knows what a typhoid carrier is. The morning papers are constantly marring the enjoyment of breakfast by telling how some butcher or milkman or baker has infected a whole town with typhoid because his body had

But I can't be swatting flies all the time."

"No, you can't. There are other ways, though. You might make one particular spot of your kitchen very attractive to them by the use of sticky fly-paper—the sticky kind is not usually poisonous. You can buy it for five cents. Another good way is to poison their drink. Add two teaspoonfuls of formalin to a pint of water and set it around in shallow dishes. You can put it out of the children's reach, but in that strength it wouldn't poison them if they did drink it."

"Ella has some other company she is more anxious to get rid of than flies," said my wife significantly.



I looked intently but in vain for the tell-tale blush

the peculiarity of harboring the typhoid germ without itself being made ill by the disease. Such "carriers" are middlemen, as it were, who simply take the germs, polish them up a little, and hand them on to the consumer.

You remember about Typhoid Mary, of course. What a terrible lot of trouble that woman did bring! But though I could imagine the old, fat Mary as a typhoid carrier, the idea was unthinkable in connection with dainty, fairy-like Alice.

One thing was quite sure, however: the test must be repeated. If she had been a typhoid carrier a month or so ago she undoubtedly was yet. But I felt sure my bacteriologist would have to reverse her decision. I should be obliged to explain to Alice that I needed yet one more drop of her blood, but no one else need know—and especially not John Gandy.

As I drove by Gandy's that evening I stopped long enough to ask Alice to come into the office on her next trip to town. "Are you going on to the Simmons?" asked Mrs. Gandy.

"Just for a few minutes," I replied. "Anything I can do for you?"

"No, but I thought I'd warn you that they are hardly fixed for company."

"What are they doing?" "Cleaning house. Mrs. Simmons has gone to visit her sister and the young folks must be planning a surprise for her. They have everything turned out into the yard and are camping out."

"Tell them from me," shouted John as we moved away, "that the best way to clean that house is with kerosene. They should pour about a gallon around in selected places and then apply a lighted match!"

The Simmons certainly were cleaning house. Every piece of furniture not absolutely a part of the building had been carried out.

We walked through the empty house. It was a building that had been very proud in its day and was not yet beyond improvement. It still harbored a great many odors and an army of flies.

"It's just about no good to talk about keeping flies out of a house like this where there's a lot of young children in and out all the time," Ella complained. "George has the windows and doors all screened, but all that the youngsters want to do is to swing on 'em."

"But it isn't as bad as not having any screens, I'm sure, Ella," I consoled her. "I can tell you how to help get rid of the flies that enter in spite of your screens."

"Oh, yes, I know. You'll say swat 'em.

"It's bedbugs!" Ella blurted out, her face a vivid crimson.

"Well, that's hard luck," said I, "but you can get rid of them."

"Go through your house, Ella, and tear off all the old paper, especially where it is hanging loose. Take down all the hangings of every kind. Plaster up all the cracks. Shut your windows tight and stuff your keyholes, and you are ready for the first step, which is to burn sulphur. Two pounds of sulphur will do for a room ten by ten. Don't be afraid of adding a little extra, the insect won't be any more than dead whatever you do. Remember that sulphur will tarnish metal, bleach draperies, and injure plants, so be sure that none are exposed to it. Set a tub of water in the middle of the floor, place in it three or four bricks, and on these a metal pot containing your sulphur, thus doing away with the danger of fire. Add a little alcohol and your sulphur will burn easily. You will need about sixteen pounds of sulphur for this house, and you would better get as many vessels as you need to do the whole thing at once. Then you can seal up doors and windows and stay out."

"That'll kill 'em all off, will it?" asked Ella, a vindictive gleam in her eyes.

"It ought to, Ella, but I cannot give an absolute guarantee. And it doesn't do much to their eggs."

"Well, what else can I do to get rid of 'em?" She was a bloodthirsty girl.

"After the sulphur has been burning about four hours you can open the house and let it air. Then you can take kerosene, in an oil can with a long nozzle, and squirt it all around the baseboards and window casings and into all the cracks and crevices in which you can possibly squirt it, especially in the bedrooms. But be very careful not to set the house on fire."

"Now, here are all these old bedsteads. Keep a kettle going on your gasoline stove and just drench them with boiling water. Do that to all the old furniture that will stand it. On the remainder use kerosene or benzine. Boiling-hot water poured over insects or eggs will kill them."

"My, it's an awful lot o' work!" sighed Ella. Ella was still primitive.

"But it's worth it," I assured her. "This little insect is a disease carrier. It has been absolutely proved that he has carried bubonic plague, as fatal a disease as is known to man. In all probability he carries typhoid fever, and we have quite a suspicion that he carries worse things yet."

As we drove past Gandy's on our way

home, John was sitting by his gate, all alone.

I threw my gear into neutral, and seeing us stop John came up to the car.

"John," I said gravely, "I don't like your attitude toward these young Simmons. They have been held down all their lives by a drunken father. In spite of that they have escaped his habits, and now they are making valiant efforts to pull out of the mire. You ought to encourage them."

"I'll give them encouragement to move away. That's how far I'll go," John replied savagely.

"You're talking nonsense, John. Just nonsense! They're going to stay here, and it seems probable to me you'll get more closely related instead of getting more distant."

John was quite warm, about as red hot as I remember seeing him.

"They may stay here," said he. "Possibly I can't help that. But they'll be no relatives of mine if I can prevent it. People as low and dirty as to bring typhoid to a community aren't worthy of recognition. I would cast off my own brother if he did such a thing."

A Christian man might have been just as hot, temporarily, but he would have had one absolute check. He could not carry his hot passion to the altar.

But John had no other altar than his intellect.

Rather sadly I drove on.

A day or two later I was at my desk, busy with some birth reports, when I turned my head and saw Alice laughing at me.

"I am here," she said, "to shed my blood in the interests of science. Did you not tell me that you needed a second blood test?"

Looking at her merry, laughing face, her clear, glowing skin, it seemed quite absurd that she could have presented herself for such a purpose. A typhoid carrier!

"Sit in this chair while I pull your ear," I commanded. "Now, see if you can feel this?"

The sharp point of my knife pricked the skin as I spoke.

"Not a bit," she announced, rising. "Is it all ready to send now?"

"All ready. I will leave it at the laboratory as I go out."

"If you would as soon trust the other sex," she dimpled, "I shall take it over myself. I know Doctor Balden real well. We were both raised in the same little Missouri town."

I watched her down the stairs and saw her cross the square to the state house where the doctor had her office. A typhoid carrier—the idea!

As I was starting for the country that afternoon I passed Alice on the street.

"Get in," I called to her, stopping, "for I am going right by your place. I promised George Simmons I would look in to see his well. He thinks he has it fixed about right now. George is sprucing up a good deal lately."

She was settling down into the seat by my side as I said these last words, and I looked intently but in vain for the tell-tale blush.

Still we were not far on our journey before I found the conversation in some mysterious way drifting to the subject of wells, and she was asking in a perfectly natural manner:

"Why should a well be such a dangerous thing?"

"So you are interested in wells," I teased. "May I ask whose well in particular?"

"I named no names, Doctor, so you aren't fair. Don't you believe girls who are going to teach school ought to know all about such things?"

"Most decidedly. Also girls who are not going to teach school but may some day teach families. I have heard folks express all manner of queer ideas about wells and springs and other collections of water." I continued, "starting with the small boy who always knows a swimming hole that has no bottom, and continuing to the grown-ups who have a vague idea that a spring is manufactured in the bowels of the earth. A spring, like all other stores of water, comes originally from the clouds. The rain falls upon the earth, part of it runs off at once and fills the ditches and streams and creeks; part of it sinks into the ground, which absorbs a part and allows the rest to sink deeper until it reaches an impervious stratum and forms a collection of water. This seeks an outlet, which it finds on a bank, in a pond or lake, or in a hole dug by man perhaps for a well. It is then exhibited to us as a spring. If it has any special properties, any sulphur or saline or iron, or whatever it may be, it has drawn it from mineral deposits through which it has traveled to reach its bed. Now you understand about a spring?"

"Yes, sir. And when we dig a well we find water at the particular layer of the earth that is dense enough to stop the further passage downward of the rain water."

"Exactly. And that is one reason why

a well may be contaminated, especially a shallow well. The water in it has all soaked through from above, and if it has passed through a great deal of contamination it may not receive enough purification by the earth it filters through to get rid of its load of evil. That is one reason why an outhouse should never be located on the same plane and within easy distance of a well."

"So of course you want to help Mr. Simmons to get his well fixed up right."

"I certainly do. I'm not anxious for any more typhoid at their place."

"I'm sure you're not, Doctor. Nor are any of us unless it might be John. I declare, the way he talks sometimes he seems real crazy on the subject, and I almost believe he would consider another case as a personal vindication."

I dropped Alice at her gate and went on to the Simmons place.

George proudly led me to his well with a conquering air.

"Looks pretty good, doesn't it?" he asked, his pride beginning to feel the chill of my silence.

"Looks better than it really is, I'm afraid, George."

"What's the matter with it?"

"In the first place," I asked, "is this covering animal-proof?"

George looked very carefully. "They can't get in through the top," he insisted.

"Granted. But how about the sides? How about a rat hole or a rabbit run opening in below? A cat could probably get under this cover, let alone a mouse."

"What do I need to do?"

"We'd better make this well all over, George. It is cased with old rock and has all manner of crevices and openings. Get a mason to put in a brick casing right from the bottom, and have it laid in cement mortar, pointed inside all the way up from the water-bearing portion. Bring this casing up about a foot and a half above the ground surface, and have a shield of concrete sloping down to the ground on every side over some well-tamped clay. Then let your floor fit snug on the top of the casing, leaving no space at all for frogs or mice."

"I suppose germs can get in even then," said George with a little laugh. "Germs seem to be able to get anywhere."

"You've got a floor of good plank here," I replied, "but you can see it won't exclude germs. It will soon warp and crack. You know that when you come up from the barn you often have stuff on your shoes that you wouldn't like in your coffee. It scrapes off on the well cover. Then it dries a little, and the next thing it is sifting through into your well. You must make this floor germ-tight."

"All right, Doctor. Tell me how."

"While you are having your casing set in cement mortar and your concrete shield, you may as well have this floor laid in cement. That's germ-proof. But if you don't care to do that you can lay a second floor at right angles to this, and use tongue-and-groove flooring of a good hard wood. Have the edges painted with white lead and drive it well together. That will give you a pretty tight floor, but don't forget to have proper flashing around your pump to make that opening tight too."

"And I thought I had this all fixed in first-class shape!"

"You do have it greatly improved, boy. I'm going to have John Gandy come down and look at it, because he still uses well buckets, and it is next to impossible to use well buckets without letting them carry some dirt back into the well, though a bucket with a patent tipping device that never allows the bucket out of the well casing is not so bad. But while you are fixing, George, we want to do it right. A good well is one of the best signals of decency and intelligence that a farmer can exhibit."

"We'll do it, Doctor. I'll get one flag up anyway."

"And I hope more than one, George. There's just one thing about a farm that is more important than a good well."

"Name it," cried George. "While we are after improvements, lead us on."

Ella stood by expectantly, and in the face of such eager hopefulness I felt a little hesitation about introducing my prosaic subject. For the reform I intended to suggest was an improvement of the Simmons' outhouse.

I felt quite relieved just then to see striding across lots the erect figure of the young minister. His coming would certainly create a diversion. Yet I did not wish to abandon my subject entirely. I was the doctor, and doctors must often talk on unpleasant subjects.

"The best way to understand about this improvement," said I, putting it as briefly as possible, "is to write to the Department of Agriculture at Washington, or else to your Congressman, to see that you get a copy of Farmers' Bulletin 463. This is an extremely important document that means more for keeping health in the family than any one thing you can get."

Mr. Frank strode into the group just as I concluded.

"Health in the family!" he commented. "That's the talk. I talk it myself as much as I can. It goes along with the gospel of good cheer."

The young minister seemed to have become almost as much at home as I, and it was pleasant to watch the genial comradeship between him and George.

He was going on to Gandy's and was glad to ride over with me.

Here was my opportunity to see if he could help with John Gandy, for I felt from the remarks Alice had made that afternoon that John was certainly a fit subject for ministerial care.

The young man listened patiently to my recital of the facts.

"John not being a church member, or perhaps to say it more definitely, being a non-church member, perhaps you will think this none of your business," I concluded.

"Not for a moment," he replied. "He may not be a church member, but none the less he is in my charge. It doesn't matter a bit that he would probably laugh at my feeling that way. Gandy did not place me in control. I hold my commission from Higher Authority. He has said unto me, 'Feed my sheep.'"

There was a look of grave dignity on his face as he stepped up to John's gate, and I chuckled to myself to think what might be in store for Mr. John.

[TO BE CONTINUED]

Who Really Won?

By Warren Ichler

[CONTINUED FROM LAST ISSUE]

THEN at last came the third day of the fair when the awards in the driving-horse classes were to be made.

"Now remember, John," said Mr. Carson, "There's as much or more in the way you handle her and yourself as there is in the merits of the horse. Got Kitty's certificate all right?"

"Right here," answered John, tapping his breast pocket.

"All right, son. Go on over to the track," said Mr. Carson, and as he hurried to the inside of the half-mile oval he watched proudly the erect figure of the boy as he carefully guided the handsome mare onto the track.

Five colts formed a small semicircle in front of the judge's stand in the three-year-old class.

One of the judges examined Kitty's mouth carefully, and smiled approvingly when the mare arched her handsome neck and tried to muzzle into his pocket in search of sugar.

"Point one," thought John happily. "They can see she has good manners."

Next one of the judges called to the drivers of the colts: "Gentlemen, walk your horses to the quarter pole and then turn and trot slowly back."

Here a complication seemed to arise for several drivers. It is just as much part of a horse's education to be able to walk gracefully and swiftly as it is to trot easily and quickly. It began to develop, however, that some of the drivers were not aware of this, as three of the five colts could not walk more than twenty yards without breaking nervously into a trot. Arthur's Maude was one of these. Kitty showed at her best here.

Once more the judge lined up the colts at the stand and called:

"Gentlemen, drive your horses at full speed around the track."

Arthur had craftily taken the pole (the inside position), and at this sort of trial gray Maude was at her best. She fairly flew up the back stretch and, in the track vernacular, "Led 'em home with yards to spare." It was hardly yards to spare though, as black Kitty had closed up on the home stretch. Still, she had been beaten.

Then the judges gave their final examination.

They could not have failed to note Maude's heaving flanks and sweaty coat as against Kitty's comparatively fresh appearance; but the speed trial was still uppermost in their minds, and after some hesitation one of them pinned the blue ribbon on Maude while another fastened a red on Kitty. John had lost.

"Hey, boy, I want to speak to you," called a voice. "No, not you with the gray horse;—the boy with the black, is the one I want to see."

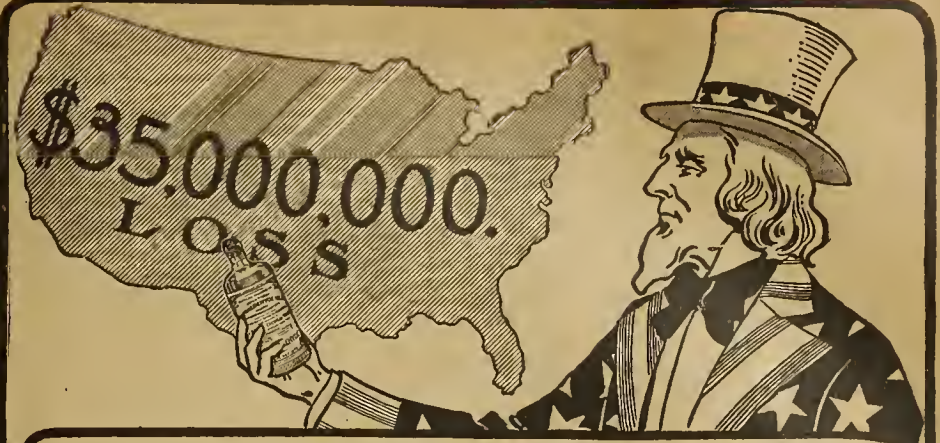
A stout, quietly dressed man pushed his way rapidly to where the two horses were standing, and was soon followed by John's father and Mr. Williams.

"Do you want to sell that mare?" asked the stranger. "Your father and I know each other very well. I am a buyer for an Eastern firm. I'll give you four hundred for your colt."

"Take it if you wish, son," said Mr. Carson. "It's a very fair offer."

John hesitated a moment. "I guess I'll keep her," he finally answered. "You see," John added, "I'd like to sell to you, but I believe I can win in the four-year-old class with Kitty next year."

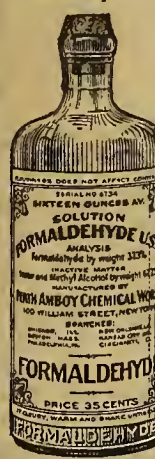
And the next year's fair proved him a good prophet, but by that time gray Maude was so inferior to Kitty that Arthur had not the courage to enter her.



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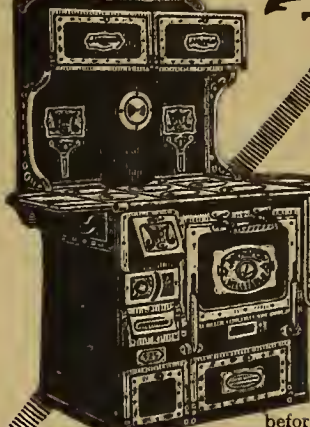
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Charlotte Russe

THERE are few desserts or supper dishes more attractive or more economical than the various kinds of Charlotte Russe, and none more easily concocted, once the trick of making a good jelly and good sponge cake is acquired.

Though an expensive appearing dish, it is not so in effect, as only the one dessert dish is required where this is used, thus doing away with the necessity of pudding, pie, or fruit. Almost any combination of fruit jelly and cake can be adopted, orange jelly being especially good.

The following recipe for sponge cake is especially good, being of suitable size, fluffy, and reliable:

Two cupfuls of white sugar, four eggs beaten separately, two cupfuls of sifted flour, two teaspoonfuls of baking powder, three-fourths cupful of hot water. Sift sugar, flour, and baking powder three times. Add the boiling water, stirring

of the cake with strawberry leaves and whole berries with the stems on.

Orange chartreuse may be garnished with sections of orange dipped in a strong syrup and then in granulated sugar, and dried in a warm oven.

Vegetable Soup—Three quarts of water, one quart of shredded cabbage, one pint of sliced potatoes, one-half pint of minced carrots, one-half pint of minced turnip, one-half pint of minced onion, two tomatoes, two tablespoonfuls of minced celery, two tablespoonfuls of minced green pepper, two tablespoonfuls of butter, three teaspoonfuls of salt, one-fourth teaspoonful of pepper. Have the water boiling hard and add all the vegetables except the potatoes and tomatoes. Boil rapidly for ten minutes, then reduce the heat and let boil gently one hour. Then add the other ingredients, and boil one hour longer. Have the kettle only partially covered during the cooking.

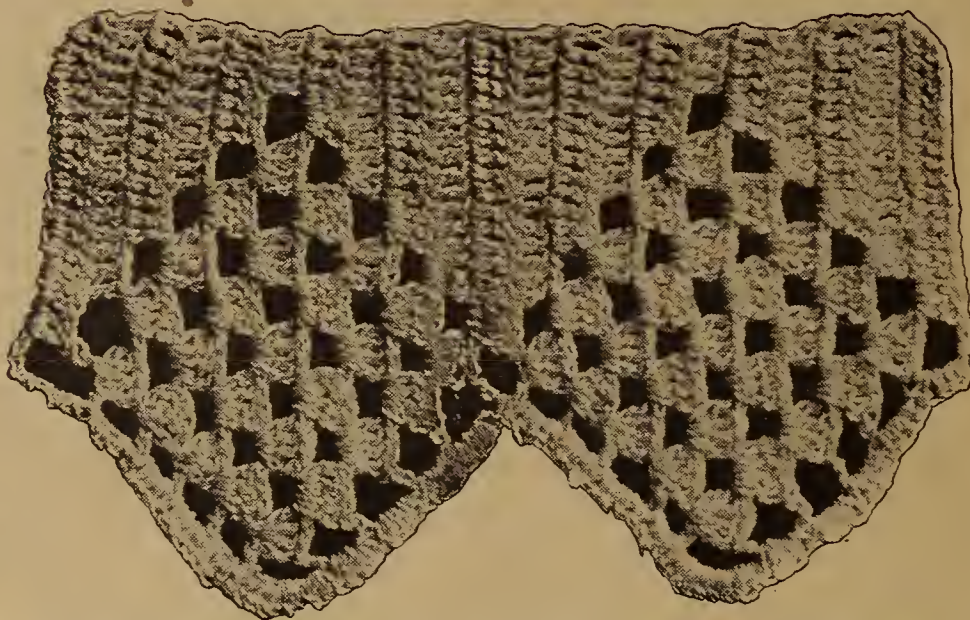
M. S. H., Indiana.

Baked Meat Roll—Get a good round steak and spread it out flat. Make a stuffing of stale bread crumbs, season with salt, pepper, sage, and parsley, and spread this thickly over the steak. Roll, and carefully tie each end and in the middle. Add one teaspoonful of beef extract to a cupful of hot water and pour over the roll. Bake in a steady oven, basting two or three times.

L. G., Colorado.

Chili Gravy—Fry one medium-sized onion in four tablespoonfuls of bacon grease. When done, add one level tea-

Diamond Lace



This is a popular form of crocheted lace that may be used on towels, pillow cases, and the like. Complete directions for making it can be had by sending four cents in stamps to the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio

thoroughly. Then add the well-beaten yolks of the eggs, and lastly fold in very lightly the stiffly beaten whites. Bake in a straight-sided pan, similar to an angel-food tin but without the tube. Bake forty minutes in a rather quick oven.

When cold remove the center of the cake and fill with one pint of jelly. To remove the center, place on top of the cake a dish which holds the same amount as the jelly, and mark a circle on the cake. Cut down through this circle to within half an inch of the bottom of cake, or more. Now take a thin narrow-bladed knife and pass through the side of cake at bottom of cut; pass the point of knife halfway around the cake, holding the butt still; remove and insert on opposite side of cake and cut the remaining half-circle. The center of the cake can now be lifted out in one piece and be used, iced to taste, as a separate cake, or can be split and used as a layer cake.

The simplest form of jelly is the various flavored jelly powders, which simply require the addition of one pint of boiling water to make them ready for use. They should not be added to the cake until they begin to set. The amount of jelly should quite fill the cake. The sides of the cake should be iced and the top piled high with whipped cream.

Jellies made from the juice of fresh fruit and stiffened with gelatin are the finest flavored, but are more trouble and expense. Very good jellies result from the use of one package of gelatin, one pint of boiling water, one cupful of sugar, and one or more teaspoonfuls of flavoring extracts.

For strawberry chartreuse either the fruit juice or the jelly powder may be used. In the season of ripe berries, mold in a few ripe strawberries, which should first be split. Place a layer of the gelatin in place, then when it begins to set place the fruit at intervals, just a few to give effect; fill in more jelly powder and a few more halves of strawberries. Pile high with whipped cream and decorate with split berries. Garnish the base

spoonful of salt, one teaspoonful of chili powder, and a heaping tablespoonful of flour. When the flour browns, add one cupful of sweet milk and one-half cupful of water. A cupful of canned tomatoes may be added if liked. Let boil a few minutes.

C. L. G., Texas.

Parsnips are peeled and boiled, and are excellent when mashed, well seasoned and served very hot. Left-over parsnips may be made into good fritters by adding to every cupful of the mashed parsnip a well-beaten egg, seasoning well and frying by spoonfuls in hot bacon fat. Another variety is given by slicing the boiled parsnips and frying slowly in butter or bacon fat. The flavor of parsnips blends well with that of pork or bacon.

Eggless Doughnuts—Doughnuts may be made very successfully with no eggs, and it will take a very clever person to detect the omission. One cupful of sugar, one-fourth teaspoonful of salt, one and one-half cupfuls of sweet milk, one-half cupful of sour cream mixed with one-half teaspoonful of baking powder, two tablespoonfuls of melted butter, two level teaspoonfuls of baking powder, and flour enough to make a dough that will roll. Have the fat smoking hot, and fry the doughnuts carefully, draining on brown paper when done.

New Kinds of Clothes

WINTER is coming. In some places it is almost here, and what about your winter clothes? Do you realize that in the past ten years the styles in under-clothing, shirts, boots, shoes, garters, suspenders, and suits have changed for men just as much as they have changed for women? This number of FARM AND FIRESIDE contains advertisements of many kinds of clothing you will need before spring. Look the advertisements over and be sure you know all about them before purchasing your supply. You are guaranteed fair and square treatment from every advertiser in FARM AND FIRESIDE.

Going After the News

In a certain town in Ohio a man is working on a little machine which will do the work of a horse in plowing corn. Anyhow, he thinks it will. This is news. In an Illinois town is a concern which is making a machine which will do all the work in the field which the small machine won't do. Anyhow, it thinks it will. In another place is made a cement post which can be nailed to. All this is news. So is that story about a bargain in building material. It's big news. But you can't get the full story unless you write the people themselves for it, just as soon as you see their advertisement. If you are interested you ought to have the news. It's a big field for self-education. And when you write, please say to them that you saw the advertisement in FARM AND FIRESIDE.

YOUNG MAN would you accept a tailored suit just for showing it to your friends? Then write BANNER TAILORING CO., Dept. 164, Chicago, and get beautiful samples, styles and a wonderful offer.

MEN WANTED

Prepare as Firemen, Brakemen, Motormen, Conductors and Colored Sleeping Car Porters. Standard Roads. Experience unnecessary. Uniforms and passes furnished. Write now. Name position you want.

RAILWAY INSTITUTE, Dept. 34 Indianapolis, Ind.

The BEST Light

Cheapest and best light for homes, stores, factories, churches and public halls. Makes and burns its own gas. Brighter than electricity or acetylene. Cheaper than kerosene. Over 200 styles. Agents wanted. Write for catalogue.

THE BEST LIGHT CO.
212 E. 5th St., Canton, O.

Statement of the Ownership, Management, etc., of Farm and Fireside (Western Edition). Published every other week at Springfield, Ohio. Editor, Herbert Quick, Springfield, Ohio; Managing Editor, H. B. Potter, Springfield, Ohio; Business Manager, H. J. Brown, Jr., Springfield, Ohio; Publisher, The Crowell Publishing Company, Springfield, Ohio. Names and addresses of stockholders holding 1% or more of total amount of stock: American Lithographic Company, New York, N.Y.; G. H. Buck, New York, N.Y.; L. Ettlinger, New York, N.Y.; H. J. Fisher, New York, N.Y.; E. G. Hazen, New York, N.Y.; E. W. Hazen, New York, N.Y.; G. H. Hazen, New York, N.Y.; J. P. Knapp, New York, N.Y.; F. Lamont, New York, N.Y.; A. H. Lockett, New York, N.Y.; J. S. Phillips, New York, N.Y.; Pomroy Bros., New York, N.Y.; I. M. Tarbell, New York, N.Y.; J. W. Thompson, New York, N.Y.; Wm. Watt, New York, N.Y.; Known bondholders, mortgagees and other security holders, holding 1% or more of total amount of bonds, mortgages, or other securities: None. (Signed) The Crowell Publishing Company, by J. S. Seymour, vice-president. Sworn to and subscribed before me this twenty-second day of September, 1915. (Signed) Mary B. Lamkin, Notary Public, New York County, N. Y. Certificate filed in New York County. (Seal.) (My commission expires March 30, 1917.)

MAGAZINES WITH FARM AND FIRESIDE

By special arrangement with several of the most prominent magazines in America, you can get any one of these periodicals for a year with Farm and Fireside as explained below.

Farm and Fireside, 1 year, regular price 50c
To-day's Magazine, 1 year, regular price 50c

Both for **60c**

To-day's Magazine has been termed the one necessary woman's paper. This title seems quite appropriate because To-day's contains a valuable amount of important information which is both instructive and entertaining. The stories are wholesome and interesting. The fashions and hints on dress are up-to-date and sensible.

Farm and Fireside, one year, regular price 50c
Woman's World, one year, regular price 35c

Both for **50c**

The Woman's World is one of the best magazines printed for the money; in fact, is superior to many magazines selling for more than this. It is not only attractive in appearance, but its columns are full of the choicest literature that money can buy. It is a big value at a low price. Every farmer in the country should take this opportunity of obtaining the Woman's World without cost in connection with Farm and Fireside.

Farm and Fireside
The Housewife
For One Whole Year

Both for **60c**

The Housewife is a bright, entertaining monthly magazine containing many wholesome serials and short stories and articles of unquestioned merit. It is a magazine that a woman looks forward to receiving each month. It is well illustrated with the work of the best-known artists. The Housewife is edited by Lillian Dynevor Rice.

ORDER TO-DAY

Farm and Fireside
Springfield, Ohio

Let Us Tell You The 1916 Price

on this beautiful Mission Base-Burner and on 500 other styles and sizes of best quality ranges, cook stoves and heaters that you can choose from our

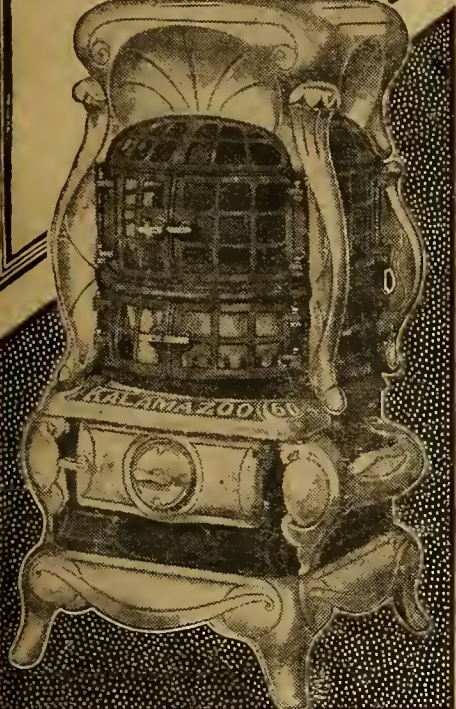
New 1916 Catalog Mailed With "Recipes" FREE in Rhyme

Write for these two books today—see new styles—1916 wholesale prices—read latest, helpful recipes in catchy sparkling jingles. Choose your Kalamazoo at once for 30 days' trial, 360 days' approval test—on cash or easy payment plan—we pay freight and ship within 24 hours. \$100,000 bank guaranty. Write today.

Ask for Catalog No. 183

Kalamazoo Stove Co., Manufacturers Kalamazoo, Mich.

We make ranges, stoves, gas stoves, furnaces and white enameled metal kitchen cabinets. We have four catalogs—please mention which you want.



A Kalamazoo
Trade Mark Registered
Direct to You

Boston Garter



WHITE FLAME

BURNERS make your old kerosene lamps and lanterns give a brilliant white light better than electricity or gas. Doubles your light. Saves oil. NO MANTLE TO BREAK. Guaranteed Safe and Reliable. Delights every user. Send now for complete sample postpaid 35 cts., stamps or coin. 3 for \$1. MONEY BACK IF NOT SATISFACTORY. LIVE REPRESENTATIVES WANTED. EXCLUSIVE TERRITORY. WHITE FLAME LIGHT CO., 69 Clark Bldg., Grand Rapids, Mich.

MAKE YOUR BIKE A MOTORCYCLE

at a small cost by using our Attachable outfit. FITS ANY BICYCLE. Easily attached. No special tools required. Write today for bargain list and free book describing the SHAW Bicycle Motor Attachment. Motorcycles, all makes, new and second-hand, \$35 and up. SHAW MANUFACTURING CO. Dept. 47, Galesburg, Kansas.

You Can Earn This \$750 Overland

This 1916 model with full electric equipment may be yours without one cent of cost. All I ask is a few hours of your spare time taking subscriptions to my popular farm and home magazine. Each subscription counts so many points and if you have the most points on December 18th you get the Overland without one cent of cost, all freight charges prepaid. Wouldn't you feel more than repaid to receive an automobile in such an easy manner? No need to worry about not being able to afford a machine—I have solved that problem for you. I have Given Away 40 Autos in the past few years. Not one of the winners were possessed of any more ability than you. Their names and addresses will be furnished on request. It's worth your investigation. Send for my free booklet "Auto Dreams" today. A postal will do. W.W. Rhoads, Mgr., 828 Jackson St., Topeka, Ks.

AGENTS: \$6 PER DAY AND UP

MEN AND WOMEN
Out of work? Got a lot of spare time? Handling a poor line now? We want an active man or woman in each town to open an agency for our famous **NON-ALCOHOLIC FOOD FLAVORS**. Colors, Soaps, Perfumes, Toilet Preparations, etc. Over 100 different varieties. Flavors put up in tubes, not bottles. Fast sellers, steady repeaters. Every home a customer. Commissions paid in real money—\$4, \$6, \$8, \$10 a day. Little or no capital required. Experience unnecessary. Full instructions for beginners. Fine light sample case furnished. Write for full particulars **FREE**. **AMERICAN PRODUCTS CO., 4002 Third Street, Cincinnati, O.**

New Fall Patterns

Which Make the Sewing Days Easier



No. 2885



No. 2886



No. 2887



No. 2888



No. 2885

No. 2885—Child's Coat with Side Closing. 2 to 10 years. Material for 6-year size, two and one-half yards of twenty-seven-inch, or two and one-eighth yards of thirty-six-inch, with one-half yard contrasting. The price of this pattern is ten cents

No. 2886—Child's Sleeping Garment. 1 to 8 years. Material required for 6-year size, two one-half yards of twenty-seven-inch, or two and one-eighth yards of thirty-six-inch material. Price of this pattern is ten cents

No. 2887—Child's Set, including Hood and Mittens. 1, 2, and 4 year sizes. Material for any size, one yard of either twenty-seven-inch or thirty-six-inch material. Price of this pattern is ten cents

No. 2888—Child's Leggings. 1 to 6 years. Material for 2-year size, one and three-eighths yards of twenty-seven-inch, or one and one-eighth yards of thirty-six-inch material. Price of pattern, ten cents



No. 2899



No. 2715

No. 2828—Yoke Waist with Double Collar. 34 to 42 bust. Quality of material required for 36-inch bust, two and one-half yards of forty-inch material, or two yards of forty-inch material. This waist is an excellent model for every-day wear, in linen, or may be made of crepe de chine or washable silk to wear with the tailored suit. The price of this pattern is ten cents



No. 2874—Girl's Smock with Plaited Skirt. 6 to 14 years. Material for 8 years, three and five-eighths yards twenty-seven-inch, three-eighths yard for collar. Price of this pattern is ten cents

No. 2899—Waist with Printed Overblouse Effect. 36 to 48 bust. Price of this pattern is ten cents

No. 2715—Side-Plaited Skirt: Raised Waist Line. 24 to 42 waist. Hip measure in 26 waist, forty inches. Width three and three-fourths yards. The price of this pattern is ten cents

This dress shows the newest for the fall and winter. The pointed overblouse makes it particularly good for the woman who is inclined to be stout. Full skirts are in again, and most women greet them gladly, for they are graceful and far more comfortable. This dress is suitable for Sunday.



No. 2899



No. 2715



No. 2794—Apron with Cross-Over Belt. 36, 40, and 44 inch bust. Material for 36-inch bust, three and one-half yards of thirty-inch material, or three and three-eighths yards of forty-inch material. This is a most practical apron, for, without being clumsy, it is big enough practically to cover the entire dress. Price of pattern is ten cents

There are a great many more attractive aprons and house dresses illustrated in the new *Woman's Home Companion* catalogue. This catalogue has just been issued and will be sent to any address upon receipt of a 2-cent stamp. Send your order to FARM AND FIRESIDE, Springfield, Ohio.



No. 2828



No. 2794

But! Here comes cold fall wind

HERE comes cold Winter snow. No one knows when you will want the comfortable put over your bed.

Have a nearby dealer fit you out with Mayo Underwear, the only fifty-cent underwear that is knit in the dollar way. Then for warmth, fit and downright wear.



More Elasticity More Warmth

12 Superiorities 12

1. Mayo 10-rib fabric
2. Mayo mule-spun yarn
3. Mayo rip-proof seams
4. Sleeves and legs shaped to fit
5. Full-size armholes
6. No binding at elbows
7. All edges laundry-proofed
8. Snug-fitting collar and shoulders
9. Snug-fit cuffs and ankles
10. Mayo reinforced crotch
11. Full-size seat
12. Big, strong pearl buttons

12 Superiorities 12

And Mayo Underwear is wonderfully elastic. You stretch a Mayo garment with your hands. Out and back, out and back, stretch and return, always the fabric returns to its original size.

That's why Mayo Underwear clings so snugly and pleasantly all around your body.

Those two ribs more to the inch make an astonishing difference.

Men's Single Garments 50c

Men's Union Suits \$1.00

Boys' Union Suits 50c

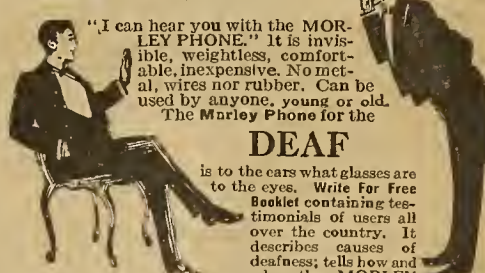
If your dealer hasn't Mayo, he'll order it immediately and you'll get it in one week or less.

THE MAYO MILLS, MAYODAN, N.C.

Mayo
MADE OF MAYO YARN

Underwear

"DON'T SHOUT"



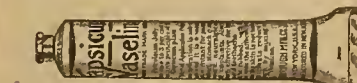
PHONE affords relief. Over a quarter of a million sold. THE MORLEY CO., Dept. 776, Perry Bldg., Phila.

For Colds, Cramps and Sprains

Capsicum blended with "Vaseline" is a most effective counter-irritant, quickly relieving pain.

Trade **Vaseline** Mark
Capsicum
Petroleum Jelly

More convenient and cleaner to use than a mustard plaster, and will not blister the skin. Sold by drug and general stores. Send postal for free "Vaseline" booklet.



CHESEBROUGH MFG. CO.
(Consolidated)
36 State Street New York City

COLGATE'S

Luxurious, lasting, refined

Comes out a ribbon—lies flat on the
brush

The Magic Wand of

We couldn't improve the—so we improved the box

Flowers of the Orient

Cleanliness Comfort Charm

Take the Tube Home

The—that shortens the shave

The real boric powder

All—are not alike

Needs no mussy "rubbing in" with
the fingers

89

Name

Address

The sentences at the left are often used in Colgate advertising—you have no doubt seen many of them a great number of times. Do you know which of the Colgate Comforts (all illustrated) each refers to?

Study them over—look at other Colgate advertisements—and see if you can name the Colgate Comfort which each phrase advertises. Write your answers on the dotted lines, put your name and address below, cut out the list and mail it to us. If you get six correct, we will send you, free, one trial size from the list below. If you get nine correct, we will send two trial sizes and if you get the entire list (eleven) correct, we will send you our special travel box, containing four Colgate Comforts—a great comfort for a week end trip. Answers must be written on dotted lines, name and address signed at bottom and must be received on or before January 1, 1916.

Indicate your choice of trial sizes by placing a figure 1 in the square before your first choice, a figure 2 before your second choice.

- | | |
|--|---|
| <input type="checkbox"/> Ribbon Dental Cream | <input type="checkbox"/> Shaving Stick |
| <input type="checkbox"/> Éclat Talc Powder | <input type="checkbox"/> Charmis Cold Cream |
| <input type="checkbox"/> Rapid Shave Powder | <input type="checkbox"/> Antiseptic Dental Powder |
| <input type="checkbox"/> Violet Toilet Water | <input type="checkbox"/> Shaving Cream |
| <input type="checkbox"/> Cashmere Bouquet Soap | <input type="checkbox"/> Florient Extract |
| <input type="checkbox"/> Pine Tar Soap | <input type="checkbox"/> Baby Talc |

COLGATE & CO.

199 Fulton St., New York



More Than 600,000 Copies Each Issue

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U.S. Department of Agriculture

FARM *and* FIRESIDE

The National Farm Paper - Every Other Week

ESTABLISHED 1877

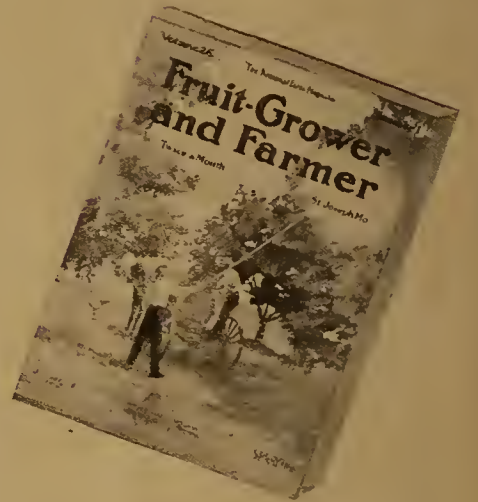
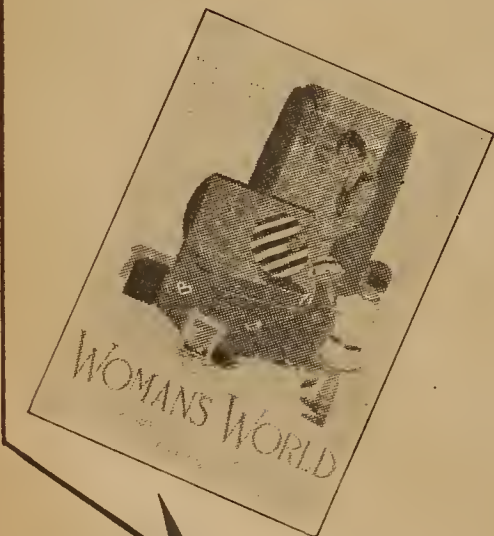
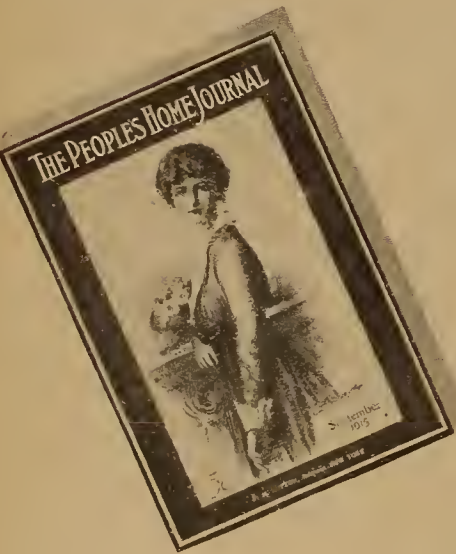
Saturday, November 6, 1915

5 cents a copy



PHOTO BY JOHN KABEL

Next—Stump Pullers or Dynamite



We Can Save You Money on Your Reading Matter

No subject is deserving of more careful, earnest thought, than the selection of publications that shall have access to your home. The reading of GOOD magazines and publications has much to do with shaping the characters of the young, also in influencing the actions of the "grown-ups." We offer below a series of attractive club offers at bargain rates. The magazines composing same have been very carefully selected. Look them over for yourself.

REMEMBER, YOU MUST SEND THE COUPON AT THE BOTTOM OF THIS PAGE.

These Offers Expire on November 27th

Our Premier Club Offer

Farm and Fireside, 1 year,	\$0.50	Our Price
The Housewife, 1 year,	.50	\$1.10
Ladies' World, one year,	1.00	
A total value of \$2.00		with the Coupon

CLUB NO. 1-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	75c with the coupon
Woman's World, 1 year.....	.35	
Plain & Fancy Needlework, 1 year .35		
Total value.....	\$1.20	

CLUB NO. 2-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	60c with the coupon
The Housewife, 1 year.....	.50	
Total value.....	\$1.00	

CLUB NO. 4-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	60c with the coupon
To-day's Magazine, 1 year.....	.50	
Total value.....	\$1.00	

CLUB NO. 6-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	60c with the coupon
McCall's Magazine, 1 year.....	.50	
Total value.....	\$1.00	

CLUB NO. 8-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	60c with the coupon
American Poultry Advocate, 1 year .50		
Total value.....	\$1.00	

CLUB NO. 10-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	60c with the coupon
People's Popular Monthly, 1 year .50		
Total value.....	\$1.00	

OUR AMERICAN CLUB		Our Price
Farm and Fireside, 1 year.....	\$0.50	\$1.60 with the coupon
American Magazine, 1 year.....	1.50	
Total value.....	\$2.00	

CLUB NO. 1-B		Our Price
Farm and Fireside, 1 year.....	\$0.50	80c with the coupon
To-day's Magazine, 1 year.....	.50	
McCall's Magazine, 1 year.....	.50	
Total value.....	\$1.50	

CLUB NO. 3-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	60c with the coupon
People's Home Journal, 1 year.....	.50	
Total value.....	\$1.00	

CLUB NO. 5-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	75c with the coupon
Fruit Grower and Farmer, 1 year 1.00		
Total value.....	\$1.50	

CLUB NO. 7-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	75c with the coupon
Boys' Magazine, 1 year.....	1.00	
Total value.....	\$1.50	

CLUB NO. 9-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	60c with the coupon
Poultry Keeper, 1 year.....	.50	
Total value.....	\$1.00	

CLUB NO. 11-A		Our Price
Farm and Fireside, 1 year.....	\$0.50	60c with the coupon
Farm Engineering, 1 year.....	.50	
Total value.....	\$1.00	

OUR WOMAN'S CLUB		Our Price
Farm and Fireside, 1 year.....	\$0.50	\$1.60 with the coupon
Woman's Home Companion, 1 yr 1.50		
Total value.....	\$2.00	

This Coupon Good for 25c

If Used Before November 27, 1915

It is absolutely necessary for you to send this coupon with your order for any of the clubs on this page. The prices quoted are cash in addition to the coupon. Be sure to send the right amount and have it reach us before

November 27, 1915

Clip the Coupon

It is good for Twenty-Five Cents if used before November 27th

The prices quoted on the above clubs are net cash. To secure the magazines at these prices, you must return the coupon with your order.

We cannot permit changes or substitution of other publications in these clubs. Order them just as arranged.

You can remit by Money Order, Express Order, Check or Stamps. If you send silver, be sure to wrap it well in paper so that it won't break through the envelope. Address all orders to

FARM and FIRESIDE, Springfield, Ohio

Clip the Coupon

FARM and FIRE SIDE

—PUBLISHED BY—

THE CROWELL PUBLISHING COMPANY, SPRINGFIELD, OHIO

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Vol. XXXIX. No. 3

SATURDAY, NOVEMBER 6, 1915

Published Bi-Weekly

Building Concrete Roads

Permanent Highways Bring the Farm Much Nearer Town

By HARRY M. ZIEGLER



After the roadbed has been graded, sand and gravel are unloaded on it in the proportions used in mixing

A PERMANENT road, costing slightly more than a first-class, water-bonnd macadam highway, and with a yearly upkeep and repair expense rarely exceeding \$30 a mile, is a pleasant reality. Such a road does not get muddy or dusty, is passable at all times of the year, and is smooth and free from bumps and holes. Enter the concrete road.

Concrete roads built in the United States during 1914 cost on the average \$11,921 a mile of 16-foot width. One hundred and forty-four concrete roads built during the twenty years previous to 1914 cost \$12,766 a mile of 16-foot width. Most concrete roads are 16 feet wide.

Local differences in the cost of concrete roads is due to the expense of getting sand and gravel. Concrete narrower than 16 feet, where the materials are near and abundant, have been built recently for \$7,000 a mile in Minnesota, Iowa, Mississippi, and Maryland.

In Michigan Upkeep is \$28.43 a Mile

U PKEEP and repair charges have been less than \$25 a year for a concrete road built in Bellefontaine, Ohio, more than twenty years ago. The yearly maintenance of the 51 miles of concrete roads in Wayne County, Michigan, costs \$28.43 a mile. It costs \$13.92 a year to keep up a concrete road at Spencer, Mass.

Eleven recently built 16-foot macadam roads cost \$9,212 a mile; sixteen bituminous macadam roads cost \$14,000 a mile; ninety-seven asphalt roads cost \$17,084 a mile; two hundred and seventy-seven brick roads cost \$18,305 a mile; and sixty-seven wood-block roads cost \$26,284 a mile. Concrete is thus becoming one of the cheapest of permanent roads.

The maintenance cost of the improved roads, other than concrete, in Massachusetts, Connecticut, Rhode Island, New Jersey, and New York for eight years, 1905 to 1912, averaged \$608 a mile. The upkeep and repairs of the improved roads of France, before the present European war started, was \$347 a year; those of England, \$415. Concrete is the cheapest of all in upkeep.

These are the kinds of concrete roads: One-course, two-course, one and two course reinforced, and grouted pavement. The full depth of a one-course concrete road is of the same mixture. The two-course road has a base of a mixture without much cement, and a wearing surface of a rich mixture.

One and two course reinforced roads are built where the road is more than twenty feet wide. The bottom course has a crown to conform with the crown of the wearing surface of the second course. A grouted pavement road consists of broken stone covered with cement mortar, composed of one part of cement and two parts sand, poured on the stone until all of the spaces are filled, and the mortar finishes to the surface. The whole is then rolled. Finer stone is placed on the top of the first course, grouted, and rolled.

Low first cost, durability, and low maintenance are requirements of an ideal road, and it should remain the same in all weather, be non-absorbent and easily cleaned.

Users of concrete roads are pleased with them, and near-by farmers almost always ask for an extension of the im-

provement. The majority of the automobiles are bought by farmers. Improved and permanent roads are needed more and more in the country. Many farmers market their products in motor cars.

Wayne County, Michigan, has the most remarkable system of concrete roads in the United States. This system was begun seven years ago. The value of the abutting farm land has been doubled in some instances, and all land has increased in value because of concrete roads. Farmers who formerly needed four horses for hauling use one now. Trips to town which formerly took a day are now made in a few hours.

Concrete roads are not affected by the weather, traffic, or mud or trash tracked upon them, as is the case with some improved roads. Freezing and thawing have no effect on them if properly constructed. Heat does not soften them, nor cold make them brittle. Concrete increases in strength with age.

The smooth concrete road makes hauling easy. A horse can pull practically twice as much as he can on a macadam road, three times as much as on a gravel road, and five times as much as on a good earth road. Thus these highways cut down the cost of marketing farm products.

Brings Entire Roadway into Use

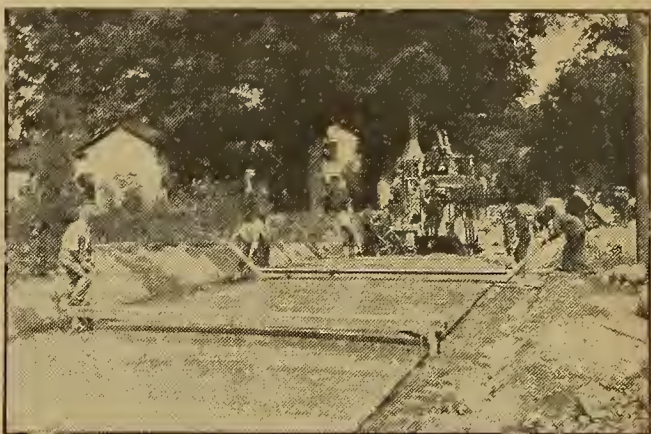
CONCRETE roads can be made nearly flat and still shed water. The surface texture, if properly constructed, is gritty, which prevents horses and wheels from slipping. The rather flat crown brings the entire roadway into use. There is no tendency to drive in the middle of the road, and the wear is even over the entire surface. Although such a road is hard, it has an even surface, which prevents wrenching of horses' knees and shoulders.

The bulk of the materials for concrete can be found in many localities. Where sand, gravel, and stone can be obtained near-by, the cost is reduced. Most of the labor can be obtained in the locality, and the money remains in the community.

The best concrete-road construction requires the greatest care in the selection of the materials in uniformity of measurement, and the actual work of building. Even though the specified proportions of the sand, gravel, and cement are correct, if there are any variations in the mix the road will be only as good as its poorest spots.

Too many persons believe that low-quality sand, gravel, and stone, and poor workmanship can be cured by the use of good cement. This is an error. Careful attention to every detail will produce a concrete road that is permanent. Inferior materials and careless workmanship will produce failures even with the best cement. If the proper sand, gravel, and stone cannot be found in the locality, they should be bought elsewhere. It is false economy to use poor materials.

Properly constructed concrete roads rarely crack. Crosswise cracks occur where joints are not close enough together. Lengthwise cracks occur where insufficient drainage and freezing weather cause heaving, and where a less thickness of concrete is placed in the center of the road than at the edges.



The concrete is mixed with a batch mixer. Only careful attention to every detail will insure a good road

Such cracks, if neglected, wear under traffic. If cleaned out and kept filled with bitumen and sand, they are no detriment to the road. Wear at the joints is prevented by protecting the edges with soft metal plates.

Concrete roads can be built successfully on heavy grades. Here is a list of a few of the places where such roads have been built with the percentage of the grade required: Kansas City, Missouri, 18 per cent and 10 per cent; Bellingham, Washington, 16½ per cent; Sioux City, Iowa, 16 per cent; Davenport, Iowa, 12 per cent; Duluth, Minnesota, 11½ per cent; Mason City, Iowa, 9 per cent; Middletown, Connecticut, 8 per cent; Stewartsville, New Jersey, 5 per cent.

The road plans used in Illinois, New York, Pennsylvania, and other States proportion the expense of building permanent highways so the farmers do not have to build good roads for the benefit and pleasure of non-resident users. Twenty-year bonds are voted in some States. Hence the greater part of the cost of construction and maintenance falls upon corporations and municipalities. In Illinois such a plan will cost the farmer eight cents an acre a year. In New York State the farmers pay about 15 per cent of the cost of the improved roads. Some counties in Pennsylvania vote on the average six mills a year for the construction and maintenance of improved highways. Many States use the motor-car tag-license fee to build improved roads.

Near-by Materials Lower First Cost

WHEN proper materials are to be had locally, the first cost of concrete roads is a little more than that of a first-class water-bound macadam. Where materials have to be brought for a considerable distance, a concrete road can often be built at less expense than any other permanent type. This is due to the small amount of materials needed.

Because of varying conditions it is impossible to give directions for building concrete roads that would apply everywhere. Where the soil is sandy no sub-base is necessary, while in other soils a neglect of a proper sub-base might result disastrously. This matter should be left to an engineer. If the soil at the excavated grade is firm and solid, no further preparation is needed; but if there are any soft or spongy places, they should be excavated and the holes filled with a firm material, packed solidly.

If the sub-base of the road is not drained properly, water will accumulate under the road, freeze in winter, and cause the concrete to heave. Where natural drainage does not take care of the surplus water, either a broken stone trench or a tile drain is necessary.

The sand and gravel are unloaded in proper proportions. The cement is stored in a dry place and hauled as needed. Concrete should never be placed on the sub-grade of the road when the temperature is below 35 degrees above zero. When the weather is hot the new work should be protected from the sun.

Concrete expands and contracts about the same as steel. If expansion joints are not placed every 25 to 35 feet, the concrete will either buckle up from expansion or crack, owing to contraction. Asphalt, pitch, tar, and tar paper are among materials used to fill the joints.



A concrete road does not get muddy or dusty, is passable at all times of the year, and is smooth and free from bumps and holes

The Editor's Letter

At Coolfont Farm, October 15, 1915

WE CAN'T be oblivious of the biggest thing in the world, can we? And what is that? The biggest fact in the world now is the world war.

It makes the whole earth different from what it used to be. What will be the result of it nobody can say; but this is certain—it will be a long time before it will be as good a world, as safe a world, and as sane a world to live in as it was before the first of August, 1914.

A friend of FARM AND FIRESIDE, Mr. Lawrence A. Toepp of Orange County, New York, is troubled about this world calamity, as we all must be if we think at all.

"In an issue of FARM AND FIRESIDE you publish a letter from one of your correspondents on the war problem, a question which is to be a live one for every farmer to consider very soon.

"The war fever which is covering the whole earth seems to be a species of insanity. Nations that have no reason of their own are drawn in because others are fighting. We are already paying a war tax in this country. Already direct taxes are being levied in at least one state where indirect taxes were sufficient before. Cities have stopped all improvements and are even increasing the size of classes in the schools so that they need not hire extra teachers. And on the top of that, when there is the severest retrenchment everywhere, comes the proposal born of universal war excitement to increase our army and navy. Some of the more conservative ones are talking of spending half a billion dollars on the navy alone.

"Military leaders, before they engage in war or prepare for war, arouse hate or fear for some other people. There is never talk of economy. There must be billions of bonds issued at high rates of interest, payable in thirty or forty years, to be a most grievous burden upon our children and grandchildren. The military leaders make noble speeches and talk patriotism, but they ask for millions of men, millions of dollars' worth of ammunition. They call for more aeroplanes, and more submarines, and more autos, and more heavy guns, and more blankets, and more, and more, and more. I shall quote in answer to all these warlike demands the following few lines from Longfellow:

"Were half the power that fills the world with terror,
Were half the wealth bestowed on camps and courts,
Given to redeem the human mind from error,
There were no need of arsenals and forts."

Thus writes Mr. Toepp. And when Congress meets, its time will be largely occupied by the very questions raised by him.

Nobody Wants to Make a War

HE IS evidently opposed to any policy of preparing the United States for defense. "Military leaders," says he, "before they engage in war, arouse hate or fear for some other people." Not necessarily. Defenseless as this country is, we need not be in fear even though we should engage in war; but nobody wants to prepare to make war, but only to defend ourselves in case war is made on us. We need not hate any other people in order to be in danger. They may hate us without reason. We as a people are not perfect, but we may remember that perfection itself is hated. The most perfect Man who ever walked the earth was bitterly hated and crucified.

Mr. Toepp pronounces the war fever a species of insanity. That is exactly what it is. War was never waged so scientifically as now. Never were preparations made so long beforehand. Never were the peoples who have been devoting themselves to the works of peace so much at the mercy of the military nations as now.

If, as Mr. Toepp suggests, the earth has become one vast asylum the occupants of which have gone mad with homicidal insanity, it seems to me that the cause of peace itself requires us to think about our own protection. People walking about in insane asylums do not go unprotected. Their own intentions are peaceful. Their own hearts are free from hate. But they know that the beings about them have lost their power of peace, and that madness has filled their breasts with hate.

Such being the case, they must take care of themselves. I think that the burden laid on us by this world insanity is going to be a heavy one. As Mr. Toepp says, we have been obliged to resort to direct taxes, whereas indirect taxes were formerly sufficient. He should have said that we have had to do this solely because our taxes were indirect. Direct taxes do not fall off, when commerce is disturbed, as indirect taxes do. The wonder is that indirect methods have not shown a greater falling off. Our taxation system and our financial system have stood the test of this great trial splendidly. The greatest problem is not taxation, for we shall bear that somehow; or revenue, for we shall in some manner pay our public bills; or bonds, for we have carried twice our present national debt with a third of the ability to stand the strain; our greatest problem is that of a military policy.

I do not feel safe personally, as a citizen of the United States, in casting my influence in favor of going unarmed in a world-wide army-mad asylum.

Why? Because it is stated by our greatest military experts in the army, in the navy, and outside of them that an invasion of this country on either coast would be comparatively easy. It would take a month to bring two hundred thousand men across the Pacific Ocean and land them on our shores, and it could be done on the Atlantic side in ten days. It would take thirty days for us to get thirty thousand men together to oppose them. It would take a year and a half for us to get trained men together in sufficient force to face an army of a hundred thousand invaders.

I have never seen these statements answered.

There are several navies more powerful than ours; and the navy is the only obstacle in the way of invasion. Submarines might protect our shores, but we have no submarines worth mentioning. Great fields of submarine mines planted along our coasts might help keep off invasion, but we have none of them with which to protect one hundredth part of one per cent of our coast,—and we have no mine-laying service. Neither have we any coast defenses except at a few harbor entrances.

This nation, so powerful if it develops its resources for defense, so weak as it now stands, offers the richest prize to a conqueror ever seen in all the world's history. I do not think we are going to be invaded, but I want things so changed that I can say, "I know we are not going to be invaded!"

Herbert Quick

Goats in Oregon

How Angoras Pay a Triple Profit

By O. H. BARNHILL

ANGORA GOATS are helping to solve the problem of clearing the three million acres of logged-off lands in western Oregon and western Washington. Goats charge nothing for their services, and they furnish meat and mohair, for which there is a demand at good prices.

Angoras thrive everywhere, except in the lodge room and the comic supplement, where they have never been able to supplant the Irishman's goat, which is supposed to live largely on gum overshoes and tin cans. The pure-bred Angora is quite a different creature, being covered with a beautiful coat of long, wavy hair, which has the sheen and luster of silk.

When it comes to foraging and picking up a good living where any other animal would starve, the pure-bred Angora is the equal of any scrub billy that ever butted his way through an unsympathetic world.

If there is such a place as goat heaven it must be located somewhere in the Oregon country, for, with one exception, conditions there are ideal for them. That exception is the cold spring rains. The goats must be sheared early in April, else they will shed their hair. But they can be protected against the rains by sheds. These need not be large and expensive, for goats are quite small and herd close together. They are not fastidious, but desire their quarters clean and dry.

As for goats' provender, brush and weeds are their bread and butter. Everything is meat to their maw, except shell-bark hickory and the may apple. If there is any other tree, shrub, or plant they won't eat, the goats haven't found it. Goats will eat leaves and bark off of brush and trees three or four inches in diameter. It takes goats two to five years to kill undergrowth. It takes two or three years longer for the roots to rot. Meanwhile, the goats are bringing in a good income from meat and mohair.

"Grass comes in where goats have been pastured," says J. H. Groves, who runs 630 Angoras in the Cascade Forest Reserve. Unlike sheep, they improve pasture, instead of killing it. This has also been the experience of James Kershaw of the Antelope Creek

country, who uses 400 goats to clear and fertilize five acres of brush land every year, which afterwards produces three tons of oat hay an acre.

Goat meat is generally sold as mutton, owing to an unaccountable prejudice. In Oregon we now have a law prohibiting this practice.

When the Ashland, Oregon, public market was started last summer, the goat men gave away free samples of Angora venison. Customers who were thus baited came back and called for more. In a little while 35 goats a week were being sold at an average price of 10 cents a pound, all of which went into the producers' pockets. At the Medford public market goat meat brings 11 cents a pound. An average Angora, dressed, will weigh 40 pounds.

Mohair is real hair, not wool. Wool is covered with tiny scales from which the grease can be scoured off. Mohair has the oil in the fiber. This is what gives mohair goods such a glossy sheen, resembling silk. Brilliantines and crêpons are made of this material, the latter selling at \$1.25 to \$5 a yard. Astrakhan is also mostly made of mohair. Plush goods furnish a big market for mohair; more than three million yards of plush upholstery are used in the railway cars of this country. Goatskins, which bring the grower \$1.75 apiece, are used for making rugs and carriage robes. Mohair a foot or more in length is used for making wigs and switches, most false hair being really goat hair.

For the past three years the price of ordinary mohair, 8 to 11 inches long, has been 32 to 35 cents. Mohair 12 inches long is worth \$2 a pound, the price increasing \$1 for every additional inch in length. A 25-inch staple is sometimes secured and sold at \$15



Coyotes will not attack the old goats, but they sometimes catch the young ones away from the flock

a pound. There is a big difference in the quality of fleeces. Those from high-grade animals have brought 38 to 40 cents when the common kinds were selling at 24 cents. One lot of 14-inch mohair brought \$4 a pound. Proper care of goats and good breeding increase the weight as well as the quality of fleeces. Ordinary goats, including kids, will shear about four pounds, while pure-bred wethers will shear an average of six pounds. One goat raiser had been getting only about two pounds of mohair from kids, but increased the amount to five pounds from the first cross with a blooded billy. Another breeder's wethers average seven-pound fleeces. Still another receives 44 cents a pound for all his mohair from pure-bred goats. Single animals have sheared as high as 15 pounds of mohair, worth nearly \$100.

Kemp Does Not Take Dye

SHORT, stiff hairs are called kemp. The hair on a common scrub goat is mostly kemp. The better an Angora is bred, the less kemp and more mohair. Kemp will not take dye, and although most of it can be separated from the mohair by machinery, there is always danger of a few kempy hairs' getting into the cloth and marring the latter by little specks and streaks of a dirty white color. Another trouble of the mohair men is the presence of strands of sisal twine, which is sometimes used in tying up fleeces. Like kemp, this fiber will not take dye, and is very hard to separate entirely from the mohair. The proper plan is to roll the fleeces together without tying and then put them into clean white sacks.

Good Oregon Angoras are worth about \$3.50, although common "brushers" can be had for \$2, and sometimes less. Blooded billies cost \$25 and up. A hundred nanny goats, properly cared for, will raise 125 kids in a year. Scrub stock is the most prolific. The nannies should be bred the latter part of November, so they will kid the first of May. Kids are castrated when two weeks old. Goats get their growth in two years, and are generally killed for meat in the fall of their second year.

Coyotes will not attack old goats, but they sometimes catch the young ones away from the flock. Only a few hundred goats should be run together, since the stronger ones in the front rank of a big bunch will get the best of the browse. And a small flock is more likely to come home at night. Woven wire makes the best goat fence, but boards or rails will do, provided the fence is built straight up. Goats are not great fence jumpers, but they will climb anything slanting. A sick goat is about as rare as a dead mule. Wet ground sometimes gives them hoof rot, for which blue-stone should be put between their hoofs. They don't mind snow and cold weather, so long as it is dry. Angora goats are natives of Asia Minor, coming from the vilayet of Angora, which has an altitude of 2,900 feet.

It pays to feed a little hay during the winter and spring, and also a small quantity of grain during the kidding season. With good grazing, however, it is possible to carry them through the year without any feed at all. But they will richly repay the cost of feed.

Oregon produces \$400,000 worth of goats and \$50,000 worth of mohair a year, being the leading State in the Union for this industry. Altogether, the State has produced about a million dollars' worth of mohair of the finest quality.



If there is such a place as goat heaven it must be located in the Oregon country, for, with the exception of the cold spring rains, conditions there are ideal for them

Farm Boys Win Medals

Eighty-nine Farmers Receive Carnegie Bravery Awards

By M. G. FRANKLIN

THE most peaceful profession in the world furnishes the most heroes. Since the Carnegie Hero Fund was established, medals have been awarded to eighty-nine farmers for deeds of bravery. Seventy-eight railroad men—including conductors, brakemen, engineers, switchmen, flagmen, yardmen, and all branches of the trade—have been decorated, while the count for miners—engaged in one of the most hazardous of all employments—is but sixty-five, and for those who follow the sea—including fishermen, sailors, deck hands, and so on—is but forty-seven. No other calling has made nearly so good a showing as farming.

Twenty-six States and three Canadian provinces are represented in the list of farmer heroes. Texas has an undisputed lead with twenty-four awards, Ohio coming second with eight, and Kansas third with five. Georgia and South Carolina have four each; Illinois, North Carolina, New York, Indiana, and Wyoming three each; Tennessee, Kentucky, Michigan, Minnesota, Missouri, Maine, Arkansas, Ontario, and Saskatchewan two each; Wisconsin, New Jersey, Nebraska, Pennsylvania, Arizona, Oklahoma, Virginia, Massachusetts, Louisiana, and Alberta one each. One of the eighty-nine was awarded a gold medal; twenty-eight received silver medals, sixty bronze. In addition, \$74,325 was awarded to pay off farm mortgages, buy farms, or for other worthy purposes, while \$425 a month is being paid in regular allowances. Nine of the farmer heroes are colored men; nineteen lost their lives in performing heroic acts.

By far the greater number of the farmers who were decorated won their honors by rescuing others from suffocation in a well or from drowning—thirty-eight of the former, thirty-five of the latter. Eight rescued others from fire, two from the fury and horns of enraged bulls, two from train disasters, two from runaways, one each from suffocation in a mine and under the hoofs of a buffalo.

The greatest recognition paid by the Hero Fund Commission to any farmer was to Nathan Duncan, colored, of West Point, Texas, to whom was awarded a gold medal and \$2,000 toward the purchase of a farm. Duncan, unaided, saved William C. Anderson from suffocation in a well. The hapless man was forty feet below the surface when sand slid from the sides and buried him to his shoulders. For a distance of twenty feet above his head there was an unsupported wall of sand from which other slides were imminent.

The dozen or more men who gathered about the well were afraid to go to the aid of Anderson.

Duncan was summoned from the fields, where he was working, and notwithstanding the danger promptly set about the rescue, fastening a rope to himself and having himself lowered into the depths. He dug the sand from about Anderson until he was free to the waist, when another slide covered the well digger to a depth of ten inches. Duncan escaped by jumping up and grasping a rope dangling above his head. The sand came only to his knees.

Performs the Most Heroic Act

THOROUGHLY frightened as he was by this time, Duncan continued his efforts. It was not until after two hours' work, however, that Anderson was liberated and hoisted to the surface, Duncan following him. Thereupon, to test the wall, Anderson gave the curb at the top a poke with a stick, and the curb and a large mass of sand fell into the well, filling it to a depth of over twenty feet. It had been with this danger over him that Duncan had worked in the depths and darkness to free a man who was neither of his kin nor race—a deed which the Carnegie investigator's report showed to be one of the most heroic of all the many thousands investigated by them.

Another well rescue notable because of the danger involved and the difficulties in the way was performed by William G. Wills, a sixty-two-year-old farmer of Tyler, Texas. A young farm hand was working in a well sixty-five feet deep, when a large quantity of sand caved in from the top, carrying with it a curb made of boards, partly covering him. After the owner of the well and Wills's own three sons had positively refused to attempt the rescue, Wills announced he would try it himself. His sons and daughters implored him not to go, but he had a rope tied around him and was lowered into the depths.

For the next hour and a

half Wills, despite his age and the difficulties under which he worked, made seven trips from the depths to the surface, carrying up boards and debris which hindered him from freeing the victim. All this time no one in the crowd consented to assist him. It was not until after he was completely exhausted that another white man, and finally a negro, came to his relief, completing the work of clearing away the fallen mass. These two also became exhausted, and no others volunteering, Wills returned to the well and succeeded in getting the young farm hand freed and drawn to the surface.

Gets Silver Medal and \$1,000

THE boy was uninjured and had been conscious throughout the entire trying period when the men worked to free him and when the relief seemed about to be abandoned. Wills was awarded a silver medal and \$1,000, while the two who finally assisted him were given bronze medals and a total of \$1,500, the money to be applied to some worthy purpose to be approved by the commission.

Perhaps none of the heroic feats was more praiseworthy, because of the ever-present and recognized danger, than that of Willard Kelsey, the eighteen-year-old farm boy of Bellona, New York, who rescued a man from an enraged bull. The man had been attacked by the animal and was lying helpless on the ground, the bull striking him repeatedly in the stomach and chest with one of its shortened and blunt horns. Kelsey ran rapidly to the scene and, although somewhat winded, he lost no time in seizing a pitchfork and thrusting the tines into the bull's neck near the shoulders. He jumped back, purposing to thrust the fork into the animal again, but before he could do so the maddened bull sprang at him and knocked him ten feet.

It returned to the attack before Kelsey could get to his feet and knocked him prostrate. He grabbed a rug in the animal's nose and held its head close to his side so that it could not strike him again. Assistance came in a short time and Kelsey escaped with only a few bruises. The man whom he had sought to rescue died in a few minutes. Kelsey was rewarded with a bronze medal, and \$1,000 to apply on the purchase of a farm for himself.

The other rescue from an enraged bull was performed by Clifford V. Graves, a farmer living near Versailles, Kentucky. Graves attacked

the animal—which was goring a man—with a pocket knife. He was knocked down and sustained a fractured rib and bruises all over his body before the bull was chased away by his dog. For his rescue Graves was awarded a bronze medal, and \$700 to be used in the payment of his debts.

Of a somewhat similar nature was the feat performed by James M. Snyder, a farm foreman employed near Schneeksville, Pennsylvania, who rescued a man from a buffalo which was butting and trying to gore the man. Snyder was carrying an overcoat, and as the bison, hearing him approach, wheeled and charged with lowered head, he emulated the example of the bull-fighting matadors and threw the overcoat over the animal's head, deftly jumping aside as he did so. The animal stopped, and freeing himself from the coat decided it had had enough of the encounter and ran away, leaving Snyder not ten feet distant, ready to resume the fray and still further protect the prostrate victim. He was awarded a bronze medal, and \$1,000 toward the purchase of a farm.

Of the eight rescues from fire performed by farmers who now possess Carnegie medals, none was more heroic than that of Clinton B. Runner, a nineteen-year-



Here is a picture of an Ohio farmer, Arthur E. English, who received a bronze medal and \$1,000 from the Carnegie Hero Fund for rescuing a man from drowning

old farm boy of Hershey, Nebraska, who saved three little farm children from a prairie fire. With his hands already burned from fighting the fire, which had swept over the farm on which he was working, Runner ran to a cave in which the three children had been left. Although the flames were burning about the door, and the cave, which was dug six feet below the surface, was filled with smoke, he entered and found one of the children, a three-year-old girl. Carrying her to near-by water tanks he wet his clothing, returned to the cave, and rescued the two other little tots. Shortly afterward the roof of the cave fell in. The children were unconscious from the smoke, but revived later. Runner was badly burned, but recovered. He was given a bronze medal, and \$1,000 toward the purchase of a farm for himself.

One of the surprising things which the record discloses is the fact that many of the farmer heroes are but mere boys, eleven out of the eighty-nine being under twenty-one years of age. Of these mere boys, five were rewarded for their efforts in rescuing others from drowning, two from suffocation in wells, two from fire, one from train disaster, and one from the rampages of an enraged bull. Although they had not yet reached man's estate, they fulfilled the words of Him who said, "Greater love hath no man than this, that a man lay down his life for his friends." A more literal interpretation was found in the heroic sacrifices of the nineteen farmers who gave up their lives for others: ten in attempted rescues from drowning, six in well disasters, and one each in mines, fires, and runaways. In almost every case those who were dependent were granted a medal and a pension, the grants being made to father, mother, or wife, as the case might be. While one of the farmer heroes was only sixteen years old, and the average of all was but thirty-two, nine were past fifty years of age and three were more than sixty, the oldest being sixty-eight. This last was the Ontario farmer, William Laird, who rescued a little three-year-old child, and attempted to rescue a five-year-old companion, from burning.

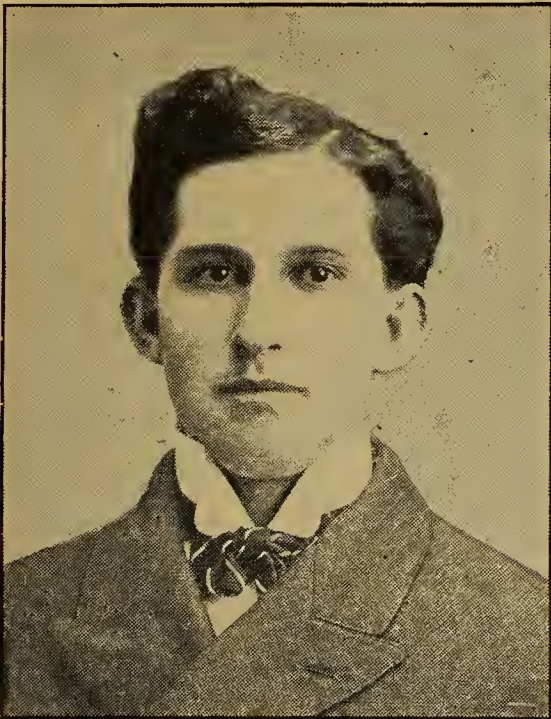
Saves Child from Burning House

SECURING one of the children, as the farmhouse was burning, he fled from the room in time to escape death, a burning curtain falling across his shoulders as he went through the doorway. One child was saved, the other perished, and for his heroic attempt the aged farmer sustained burns which disabled him for many days. He was given a bronze medal, and \$500 to reimburse for the pecuniary loss he suffered, and to be applied to a worthy purpose.

Few of the heroic feats stand out more notably than that of Samuel J. Plowman, the Texas farmer who, in rescuing a well digger from suffocation, came near to failure through the breaking of the windlass which was drawing the two men back to the surface. Plowman thrust his feet into the clay wall and, with his back against the opposite side of the well, supported himself for a few minutes, halfway from the top, while the windlass was being fixed. The rope with which the rescued well digger was being drawn up then slipped, and the man would have fallen back into the depths had not Plowman caught it with his foot and held it firm and taut until both were drawn to the surface and to safety.

The record is a long and notable one, and embraces farmers of all ages. Reading of their heroism, the truth of the words of Andrew Carnegie, as he set aside \$5,000,000 in bonds, the income from which perpetuates the commission and rewards the gallant heroes and heroines, is everywhere apparent:

"We live in an heroic age. Not seldom are we thrilled by deeds of heroism where men or women are injured or lose their lives in attempting to preserve or rescue their fellows: such the heroes of civilization. The heroes of barbarism maimed or killed theirs."



One thousand dollars and a bronze medal were awarded to Lorenzo C. Payne, a Kansas farmer, for rescuing a laborer from a 40-foot well



The surprising things which the record disclosed is that many of the farmer heroes are boys. Eleven of the eighty-nine are less than twenty-one years old. The obverse and reverse of the Carnegie medal is shown



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Out of "My Rut"

Modest Successes of Men and Women Who Wouldn't be Kept Down

The letters appearing on this page were written in answer to the question, "What was your rut, and how did you manage to get out of it?" These letters are the actual stories of real lives and show plainly that no matter how great the difficulty, there is always a way out.

Marry and be Frugal

By Edwin Weaver

This is the story of a man and woman who had little to build on except abounding faith in their ability. The "meager education" must have been of excellent quality, as this letter shows. It won first prize.

TO THE man of meager education, small capital and, worse than all, of lost hope, I want to tell of some of the struggles we had in "getting out." At twenty-one I started out with \$6.50 and a few extra clothes in a bag. I could read and cipher only with difficulty. In fact, my only capital was ability to work, having been employed among neighbors almost continually since fourteen years old.

At twenty-three I found the girl, and made all possible haste to make her my wife. This was the biggest and best step toward better things.

I worked by the year for the next ten years. How we worked and saved! In those days hired men were plenty and wages rather low. With a wife and family (we had three children) there was a pressing need for good wages and steady work.

The last four years I had the management of 300 acres, and had to set the pace for two other men. We lived in a tenant house and were allowed a garden, chickens, and a fat hog. We sold pork and used scraps of cheap meat from the slaughter house on the farm. My wife raised all the chickens possible, which, even at the low price obtained, helped immensely. One year she raised a pen of Rhode Island Reds, and when they weighed about 3½ pounds she received 25 cents each for them. We thought our fortune surely at hand.

Every foot of the garden was in vegetables, the surplus of which we sold in town. In huckleberry time my wife walked 1½ miles to pick, and would carry two half-hushel baskets home, look them over in the evening, and sell at a price we would hardly call worth while now. With united effort we were able to save a large part of my wages.

When I was thirty-three years of age we bought a small farm of 14 acres, five miles from a city of 35,000. The buildings were poor and the land poorer still. The money for the team and tools had to be borrowed. We watched the market and supplied what it demanded. Our main money crop from the start was strawberries. Other things we soon added were hush fruits, late sweet corn, and vegetables.

The soil was a dense clay, low in humus and mostly water-soaked. The composted coarse vegetable matter and manure were placed in the rows. By this method we were able to secure the greatest possible returns from the applications we made. Fortunately there was a shop for making drain tile close at hand. Here we secured slightly damaged tile at a low price, and began our under-draining at once.

Better Buildings Now

For want of a yard we had to run our flocks of chickens among the bush fruits. Thus we discovered that except during a short time at fruiting, raspberries and chickens flourish together. The scratching of the chickens supplies the necessary cultivation, and the droppings are distributed and help keep up fertility.

We have now replaced the sagging barn with a new roomy building that meets our need, and we have a new home built for convenience and comfort. With our annual crops of berries, grapes, tomatoes, peppers, beans, and a few other vegetables, and several hundred broilers, we are able, doing most of our own work, to clear more than a thousand dollars yearly from our 14 acres.

In observing the people about us, there are those who dare to do things on their own responsibility, and those who must lean on someone else. The line that

separates the two is State of Mind. When we bought our little 14 acres we considered the project with much misgiving. This is natural.

The rut we live in, whatever it may be, is our very real world. The level road seems difficult to attain. To those who are thinking of getting out of the hired-help class, the tenant class, or the old-fashioned-methods class, I would say, close your eyes to imaginary difficulties and take a chance. It's worth it. You will grow strong to meet the new difficulties and be bigger and better men and women for it.

In the climbing-out, economy is a big stepping-stone. Secure what you need, but remember, many things wanted are not needed.

Methuselah did not need books, for he had ample time to experiment. Not so with us, hence the belief in "hook farming," supplemented with discretion and experience. Farm bulletins and farm papers have helped us solve many a hard problem.

One thing more: keep expecting success, and break your neck if necessary to secure it. We want to know the reason if a pig, chicken, or row of strawberries takes to standing still on our little farm here in Ohio.

In conclusion, we are aware ours is but a modest, commonplace achievement, the product of frugality, hard work, and studious attention to business. We have a hope that it may serve as encouragement to those traveling the same road.

Servant of King Cotton

By J. B. Sims

Mr. Sims added to his letter, "This is some filling for your baskets," and asked that bad grammar and spelling be corrected. Mr. Sims may be an excellent judge of cotton, but he apparently knows little about manuscript. His contribution has been awarded second prize.

IN THE fall of 1889 I homesteaded in a thinly settled, poor mountain country in north Alabama. My capital consisted of a big resolution, a little wife with a resolution as big again as herself, money enough to buy a milch cow, a little corn, and a poor old horse which ate up my corn and then laid down and died before I got my little crop made.

The summer of 1890 was hard times for us. I was in rags, barefooted, had no meat, the sorghum gave out and the cow went dry. I thought I heard the wolf howling. A day's work was worth from 40 to 50 cents, and I would gladly have worked for that, but nobody was able to hire me.

I tried three different merchants to mortgage my cow and little crop for the amount of \$10, but all in vain. I call this a bad fix, but perhaps others will call it a rut. I couldn't get out of it then, so I just pushed the cart along until it ran easier of itself than I could possibly have made it go in 1890.

First, I earned every dollar I could and spent as few as possible, and what I saved I tried to put where it would pay a dividend. I never went in debt for what I could reasonably do without, unless it was something that helped to pay for itself and was still worth something when paid for.

I consider such debts a good master, as they encourage industry and economy, but other kinds are hard masters and make humble slaves. Of course I am a servant of Old King Cotton, but I serve him only as it suits me. I study agriculture by making soil surveys and drawings on a 40-acre table with a mule hitched to my pencil.

"Hen-Peck" Saves Himself

By Alfred Y. Lexington

This is unusual in its frankness. The writer of it wants others to know how important domestic felicity is for the accomplishment of any life-work worth while. Of course it gives only the man's side.

THE worst and deepest rut that I ever got into, and from which I have never been entirely able to extricate myself, was unconsciously and unintentionally made at the time of my marriage.

My wife had been advised by her sister-in-law to begin her wedded life "properly" or, to quote her sister-in-law's words, "Begin as you would end."

Her will was inexorable and impervious to all reasoning. No reasonable argument could supplant her sister-in-law's admonition, not even the commands of Saint Paul, who commanded that "wives obey their husbands." To be obstinate and contentious right on the honeymoon was not a relishing thought. Thus to start in, at least, in peace and harmony. I bowed in submission to the inevitable.

Eight Years at Her Beck and Call

We were farmers, or pretended to be. We had no help and very little money. The hilly farm we bought required about all my capital, and I had only a scant outfit for farming. However, I managed to get two cheap horses the second year; but every time the better half took a notion to go to the grocery store or visiting, the plow had to stand as well as the harrow, mower, or whatever implement I was using. When she said, "Unhitch your team and hitch Old Het to the buggy or cart," I obeyed her summons, and that promptly too.

We farmed for eight years. I came and went at her beck and call. She had me in the rut—in deep too. I finally sold the farm in order to make the last payment. I went into business in town and prospered.

When she could not hold the purse strings she would make clandestine trips to my money drawer or pocketbook while I was at church.

Being several hundred miles from her folks, she said at last, "We will arise and go back to the land of my people." Those were sore words, as business was prosperous. Money was coming in freely, and I was reluctant to heed such commands, and therefore contrived various means and devices to at least hold her off for a "spell." For, knowing the inexorableness of her will and her hull-dog tenacity, I foresaw my fate.

It came. I could not sell my business. I moved it. That was the "beginning of the end." In six months after our move a foreclosure occurred—from Easy Street to Poverty Alley in 180 days.

But it is a long worm that cannot turn. I turned. I made my final stand. I was like a wolf at bay. I said, "From now and henceforth I will hold the reins."

We went back to the farm. I went in debt for old horses and old farm implements, worked hard early and late, and would buy nothing to eat or wear unless I could pay for it. Sometimes we did not eat and wear as much as we desired, but we lived, or rather existed, and still worked, scraped, and saved.

The children now help, and we are slowly but surely gaining, and if Providence will continue to smile instead of frown upon our feeble efforts we shall eventually get out of the mire into which the rut led us.

"Pansy-Bed" Chickens

By Mrs. B. B. Randall

Mongrel poultry and careless ways of poultry-marketing are common ruts. This letter is explicit and contains good counsel for those who are too ambitious to raise just ordinary poultry in an ordinary way.

I AM a farmer's wife, and my rut was keeping chickens in the old-fashioned way. The colors were a veritable pansy bed, and the breeding a sure-enough mixture. My method of disposing of eggs and chickens was selling them to a common huckster who gave me what he chose in trade.

I got no winter eggs—in fact, was glad enough to get eggs in the spring. Hens couldn't lay all the time anyway, I thought. Finally a neighbor's success stimulated me to purchase a few settings of White Rock eggs. When I succeeded in raising a hundred pullets I disposed of my mongrels, purchased an incubator, and went to work.

I placed advertisements in our city papers, offering eggs and baby chicks for sale. I sold 460 baby chicks, which brought me almost \$40. One 20-cent advertisement (1 cent a word) brought me a \$12 order.

This is how I prepared them for market. I placed a thin layer of excelsior in the bottom of a 5-cent market basket and with a large needle sewed a cover of burlap over the excelsior. Then I put in about 45 chicks, right from the incubator, and sewed a loose burlap cover over the top. I let it hang down just enough to make a hover for the chicks.

On the handle of the basket I placed explicit directions as to their destination and from whom sent.

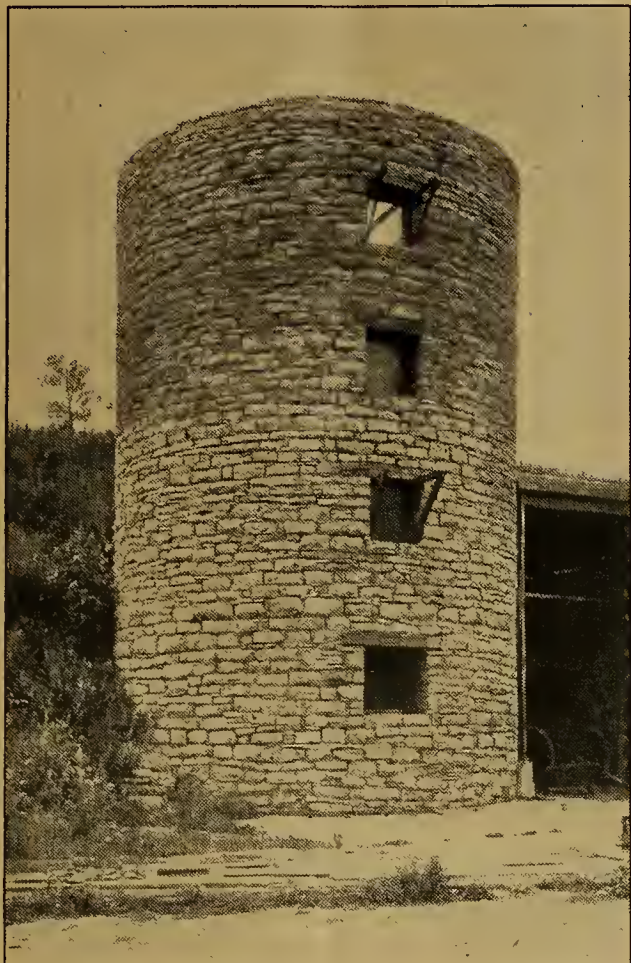
When ordinary eggs were selling at 20 cents a dozen, and often much less, at our local grocery, I was selling mine at 4 cents each. I sold my surplus fowls at 75 cents each.

My method of getting winter eggs is to make the hens scratch for their feed and to give them a balanced ration.

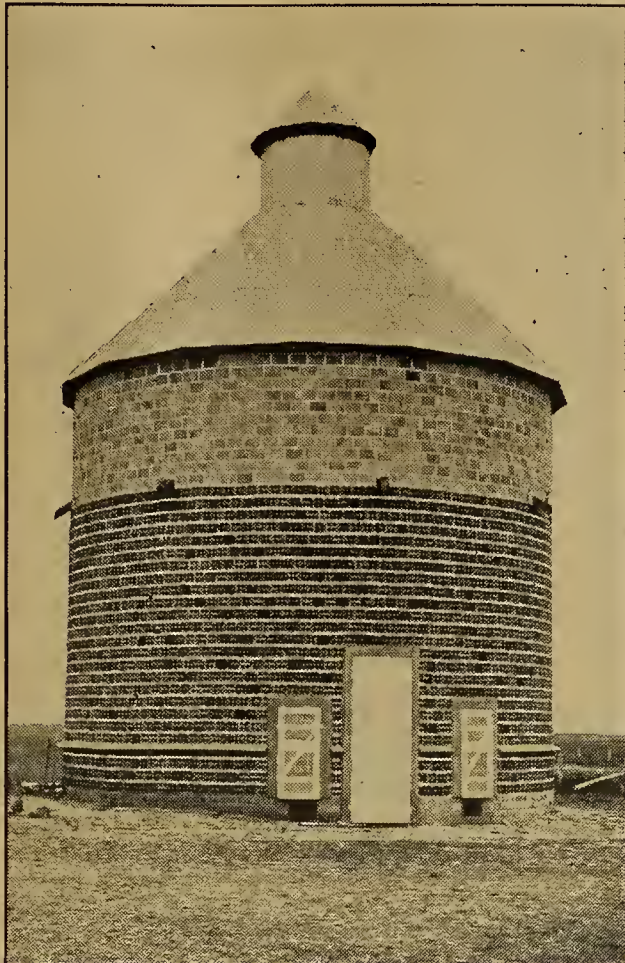
EW

Farm, War, and Zoo

Taking a Trip With the Camera Man at Home and Abroad



Built in Marion County twenty-three years ago, this silo is the oldest in Missouri. It cost \$600 without a roof. Not a cent has been expended for repairs



This hollow-tile granary was built last year on a farm belonging to John A. Cavanagh in Iowa. It holds 7,000 bushels of corn and 4,500 bushels of oats



Hollow-tile silos have been added to the equipment of many dairy farms. These twin silos have a concrete foundation. They are located near the barn



The Belgian dogs of war are given the best of care. A sick dog is not of much help to an army engaged in war. This photograph shows the dogs in Flanders being fed by Belgian artillerymen



Members of the Women's Defense Relief Corps of England put up much of the hay harvested near Eastcote last summer



Being fire-proof, rat-proof, and permanent are the merits of this hollow-tile cornerrib. It will last for years without repairs



Here is the first zebra born in captivity. It was born recently in the Central Park Zoo in New York City. The youngster is a well-marked specimen, and is as frisky and playful as any young colt

FARM and FIRESIDE

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HERBERT QUICK, Editor

November 6, 1915

Real Trouble with Peaches

HERBERT QUICK, who is writing in a great many things, is so wrong in his contention that people should stop planting peach trees because there are too many peaches being raised, that we cannot refrain from taking issue with him. It is true that hundreds of thousands of bushels of peaches go to waste every year, and even first-class peaches packed and loaded with the greatest of care frequently fail to bring 25 cents a bushel. This is not because there are too many peaches. In Muskogee this year, at a time when peaches were selling for 25 cents per bushel, and there was scarcely a market at that price by the carload, peaches were selling in Des Moines for \$2.50 per bushel. The trouble is not too many peaches, but the lack of some way to bridge over the distance between the producer and the consumer. It is not the cost of transportation, but it is the cost of a half-dozen or more middlemen, each of whom means to make a profit, and many are not willing to take a legitimate profit, but resort to crooked methods in order to avoid payment to the producer. The United States doesn't raise enough peaches by half to give every family a reasonable supply. But when peaches are unmarketable at 25 cents per bushel at the orchard and scarce at \$2.50 per bushel 300 miles away, there is something radically wrong in the system of marketing.—Muskogee (Oklahoma) "Democrat."

Every word of the above is true as to the present supply of peaches. The present supply, mind; not the possible supply. But if we had a perfect system of distribution—even if we could ship our peaches, or apples, or other easily grown fruits to the consumer by mere thought transference—we should still need to take thought against an oversupply.

Certain articles of food are staples. The world's capacity to produce and the consumption are pretty well balanced. They are one-year crops mostly, and the glut of one year causes a smaller acreage the next. Thus the balance is kept fairly even. But with a tree or vine the capacity of the world to produce is more than the possible consumption, and in ignorance of what others are doing we go on planting and planting while the prices are good, and the plants keep on bearing and bearing for years after the planters are ruined. It would be so no matter how good the distribution, and will always be so until knowledge of the probable demand and facts as to planting operations as well as present bearing possibilities are brought home to every man with an acre of land adapted to such culture. We need accurate, exhaustive statistics as to next year's production of everything, but especially with reference to the fruits of the long-lived plants which a man sets out now, not knowing that he is helping out a glut five or ten years hence.

Closing Weak Schools

LAST winter the legislature of West Virginia—let us say all we truthfully can for it—passed a law which promises great good to the rural schools of the State. This law provides for the closing of all schools with an average attendance of less than ten pupils. Moreover, it automatically closes any school, even in the middle of the term, when its average attendance falls below ten.

This law will shut up five hundred weak rural schools, and release for the school purposes of the stronger schools

about \$200,000 which it formerly cost to run them. This money, saved by closing the small schools, may be used in transporting such children as live so far away as to make it necessary, or it may be put to such other uses as the school boards may determine.

The rural school which is continually gasping for life, and quite dead whenever the weather is bad, should be in this way mercifully chloroformed. The larger school should give the pupils a fuller school life, and make the rural teacher a bigger job. And that's what she needs.

Advertising and Prices

A GREAT deal of money is spent in this country in advertising.

Buyers of goods, whether advertised or not, often think: "Who pays these big advertising bills? When I buy, don't I pay my share of it? Doesn't the advertising cause prices to be higher? Doesn't it all come out of that universal victim—the Ultimate Consumer?"

This question is answered by an examination of the per cent of the selling price consumed in the cost of selling out goods which are extensively advertised and those which are not.



Lady Eglantine, the first hen in the world to produce 300 eggs in a year under official supervision is a White Leghorn. Her phenomenal record was just made at the Delaware Experiment Station in the Philadelphia North American Egg-Laying Competition. The owner of Lady Eglantine is A. A. Christian of Maryland.

Among the largest advertisers in the country are two great clothing houses that sell men's and boys' clothing. These people who spend fortunes in advertising get their goods from their hands to the shelves of their customers at an expense of from five to six per cent of the selling price.

The average cost of selling goods which are not advertised is twelve per cent.

Instead of being a burden on the consumer, advertising is a boon to him. Advertising takes off his back half the burden of transportation from the manufacturer to himself. The advertisement is the lowest salaried agent in the world. If this were not true the best business men would not be the greatest advertisers. If there were a cheaper way of getting to the people the news about their goods, they would find it and use it.

The misfortune of the farmer is that he handles his goods in such small quantities that he cannot economically advertise, and one of the benefits of a broad co-operation ought to be the possibility of using for the products of the farm that cheapest and best of all traveling men—the printed page, which makes its journey in a mail bag.

The quickest way to start Back to the Farm movement is to take the tariff off the industry of actual farming and put it on the farmer who is farming the farmer.—The Ground Hog.

German Rural Credit

ACCORDING to Mr. David Lubin, the German Landschaft system of land-mortgage bonds, tested for 151 years, is the only one which will float and maintain its value without government guaranty; the only one which will get the farmer's money, as it has in Germany, at from three to four per cent, with amortization at the end of 30 to 50 years; the only one which avoids the hazards and expense of engaging in the banking business, and can be conducted at a trifling expense; the only one which will furnish bonds which in time of war and panic will float at interest lower than government bonds; the only one which will furnish safe investments for every investor.

It cannot be put in effect without important changes in our state laws.

Professor Brodnitz of Halle University, Germany, states that "the Landschaft system is standing the test of this war as it has at all other times."

The States are rapidly adopting rural-credit plans which are the best they find it possible to frame at the moment. It will be a pity if, when the National Government acts, it does not give us the best possible system.

"Great is foot-and-mouth disease," says our Illinois friend, "and infested hog-cholera serum is its prophet (or profit)." He refers to the fact that recent outbreaks have been attributed to the use of serum infected with foot-and-mouth disease. The lesson in this is to use no serum except that prepared by concerns whose reputation is based on the sanitary conditions of their plants and whose investments in their business in money or reputation constitute an insurance against the one disease while fighting another.

Our Letter Box

Should He Marry?

DEAR EDITOR: A good many things are to be considered in the case of the young man referred to in a recent issue of FARM AND FIRESIDE. If he has ever happened to meet the girl of his choice, I think he should have given her a chance to share his fortunes in the new country; and if she loved him as a wife should love the man in whose hands she places the happiness of a lifetime, no doubt she would be glad to go with him and help in the upbuilding of that substantial home of which he tells us. Most women prefer to help, though of course a man shouldn't risk bringing a family of children into a too poverty-stricken home. He has evidently succeeded well alone, while, maybe, with several to provide for he would have failed. Of course, if he hasn't met the right girl, which at his age may easily be the case, he should wait patiently until he does. Personally, I'd hate to wait till I had accumulated too much—it might have greater charms than the man himself. To make a long story short, I don't believe when a man has the spirit and industry of this young man, the question of ready cash enters into the case very much. He would make a living under almost any conditions; and, after all, what more does anyone want? MRS. E. M. A., New York.

"Socialistic Notions," He Says

EDITOR FARM AND FIRESIDE: Just finished reading your editorial on the "doctor" phase.

Aren't you afraid if your idea were put into effect that it would break up the home and destroy our religion and cause a reign of free love? Now, honest!

The very idea of a doctor's being paid by the Government to look after the health of the community, instead of doctoring the sick and charging for it, sounds very socialistic, and that will never do. We can't afford to have old and worn-out methods done away with and have a lot of fool socialistic notions like your editorial suggests put into the people's heads and adopted. Why, just think where it might lead!

If the fool people (pardon my terms) were granted that much they might wait more and more, until they would finally insist on getting all they earned. Then what would become of our civilization and our exclusive society? Don't you know that one person would feel as good as another, and surely that would never do. These under dogs are getting altogether too many notions in their fool heads now, without such influential writers as you putting any more into them.

I have been reading your editorials for a number of years and enjoy your progressive ideas very much. Go after them! Ivory will in time wear through, and it takes some wearing to get through these ivory skulls the common people have been provided with.

Corn and Oats Go Begging

FARM AND FIRESIDE: What do I think of sweet-clover hay? Pound for pound I would not think of exchanging yellow-blossomed sweet-clover hay for alfalfa hay for feeding to my stock. When I put a forkful of this well-cured hay in the manger along with corn and oats, the grain is never eaten until the sweet-clover hay is all consumed.

Eight years ago last March I sowed between two and three acres of oats, and at the same time sowed 60 pounds of yellow-blossomed sweet-clover seed. I cut a good crop of oats, and in September following between two and three tons of sweet-clover hay, which I stored in my barn. Soon after, as my neighbors passed they would ask, "Doctor, what is it smells so sweet when passing your barn?"

For pasture I prefer the white-blossomed sweet clover, as it makes a ranker growth and leaves more fertility in the soil.

It is well known there is such an animal as the hog. Well, the hog trait sometimes crops out in human beings. The second year the sweet clover started up so rank I decided to make a lot of money out of the seed. But the Lord knew better. I went about shaking hands with myself in view of the immense crop I should harvest. When I went to have the sweet clover cut, all the seed had fallen off but a little of the latest to form at the top of the plant. I cut the crop, but was not able to save any of the seed that was left, on account of continued wet weather.

For hay I always cut the sweet clover when the first blossoms begin to show. The drier the weather the higher I leave the stubble, to insure a strong second crop. I rake and shock sweet clover in a greener condition than other hay, since it remains in a looser condition and will dry out better.

I pastured 70 head of ewes and their lambs on five acres of white sweet clover for two months the past summer, then took them off two acres and allowed the clover to grow up, and harvested five bushels of seed from the two acres.

In February I expect to sow five acres of corn stubble to sweet clover and orchard grass.

DR. A. L. ABBOTT, Kentucky.

A Three-Bale Load

DEAR FRIENDS: The best of part of FARM AND FIRESIDE is generally the Editor's Letter. Never do I overlook what Mr. Quick has to say.

I was born and raised in Nebraska. I am proud of that fact. We came to the great Southwest five years ago. I was a perfect stranger in a strange land. At that time I had never seen a cotton plant. Now I grow a great deal of cotton and have been pretty successful at it. This is a laud of opportunities.

The picture I am sending shows myself and two boys on a three-bale load of seed cotton. This load weighed just two



tons and ginned out 1,400 pounds of lint, 2,550 pounds seed, and 50 pounds dirt. When sold I received 11½ cents for the lint, one cent a pound for the seed, bringing in all \$186.50. This was the crop from four acres of land.

H. A. NICHOLS, Texas.

Believes in a Wife

DEAR FARM AND FIRESIDE: Your "Young Friend in Madison County, Illinois," appeals to me. I have taught school for thirty years, having run the gamut of positions, as such, from a country school, beginning at "Brimstone Corners," in Indiana, and on up (?) to superintendent of several rooms, and through it all I drew heavily from my experiences as farm boy until I was fourteen years of age, and from fourteen years of actual farming, after I came from college. If important results have been accomplished by me in my chosen profession—and I feel confident that there have—I credit them to real efficiency gained by "hard knocks" during those years when hand and head and spirit were in simultaneous action.

The school of which I have been principal for some years farms twenty acres of land and a large kitchen garden, cares for a herd of cattle, necessary horse and mule teams, hogs in sufficient numbers for meat for its two hundred pupils and "employees," poultry—from what printed page could come the direction for all this and the infinite detail of repair, etc.? You will take the advice of the editor, "Go to school, young man!"

While in school you should better prepare yourself for any position than the young man who has never been in touch with nature as only the farmer can get in touch. We still own our farm. When enthusiasm flags or high inspiration is needed we go back to it. It never fails us. It begets vim, pluck, broad vision, eagerness—much like the pitchfork or grubbing hoe heightens the taste in the mouth and makes almost anything taste good. (You understand that I mean the properly vigorous use of those honorable tools.) We have not missed a copy of FARM AND FIRESIDE for many years; we need it. Take a wife along with you to school so that you may go back to the farm equipped for a long, strong pull together.

ONE WHO HAS BEEN ALL ALONG THE LINE AND IS STILL THERE.

E



A Mean Trick

"Well," said the lawyer, having listened carefully to his client's statement, "you've got about the best case I ever heard. My dear sir, you can't help winning it, whatever court you take it to. I shall be only too glad to assist you in the matter."

"Thanks," said the prospective client. "Thanks very much!" Then grabbing his hat he made a speedy exit from the office.

"What!" exclaimed the astonished lawyer. "Are you going?" "Yes," replied the other. "I'm just going to try to settle this case out of court."

"But, my dear sir, why waste money? As I have already told you, that's one of the best cases I ever heard."

"Maybe it is," said the fickle client as he hastened down the stairs, "but not for me. I told you the other fellow's story!"—The Public.

"What did Rastus get married for?" "Lawd only knows, chile. He keeps right on workin'."—Boston Transcript.

Short Honeymoon

At the end of three weeks of married life a Southern darkey returned to the minister who had performed the ceremony and asked for a divorce. After explaining that he could not grant divorces the minister tried to dissuade his visitor from carrying out his intention of getting out, saying:

"You must remember, Sam, that you promised to take Liza for better or for worse."

"Yassir, I knows dat, boss," rejoined the darkey, "but—but she's wuss dau I took her for."—Peoria Star.

Hopeful Harold's Essay on the Dog

The dog is a cross of a trance, a newspaper reporter, a steam calliope, and a tramp. From his ancestors he gets these traits: First, being able to sleep all the time unless kicked into consciousness; second, his habit of poking his nose into everything that is none of his business; third, his great vocal ability, which enables him to sit up all night and yowl at the moon in a wild, weird, wailing voice; and from the fourth ancestor he gets his roving disposition, and also his overwhelming desire to eat any time and all the time.

The dog is a great help on the farm when he can be found, but usually when wanted he is away some place digging up a forty-acre lot, killing sheep, trying to find a ground squirrel which is not there. But the dog has a wonderfully keen sense of smell, and this enables him, while at the point of chasing a bunch of cows out of the cornfield, to leave off suddenly and hunt a ground hog.

A farmer can tell the dog to go drive the sheep out of the wheat field, and the dog will start off at a 2:20 gait with a wild, glad bark and the best of intentions, but before he has taken fifty steps he sees something that he wants to fix, or he gets to thinking of his past life or something, and he goes away where he can sit down and cross his legs and study it out. But when there is company to dinner the dog is all attention, and he walks around the table and looks at them as if he were going to die any minute, and he whines and moans every time the guests put a bite in their mouths, and he makes things so gloomy generally that the visitors wish they had never been born.



The dog is the chief promoter of the flea-raising industry.

There are a great number of doggy things, some of the most prominent being dog biscuits, prairie dogs, dog fennel, dog carts, dog fish, dogs in the manger, dog ticks, dog watches, and watch dogs, and then there are people who go to the dogs.



Redeem Your Karo Syrup Labels — Karo Premium Offer

SEND us labels from 50c. worth of Karo (red or blue) and 85 cents and receive this Wonderful 10½ inch Aluminum Griddle by prepaid parcels post. This griddle retails regularly at \$2.25. It cooks uniformly on entire baking surface. Needs no greasing, therefore does not smoke, is as light and bright as a new dollar, never rusts, easily kept clean, will not break and lasts a lifetime.

At great expense we are seeking to place a Karo Aluminum Griddle in the homes of all Karo users, so that Karo—the famous spread for griddle cakes and waffles—may be served on the most deliciously baked cakes that can be made.

Karo the Syrup Choice on Thousands of Farm Tables

THE woman who keeps the syrup pitcher filled knows better than anyone else how strong the men of her household are for Karo on the griddle cakes, hot biscuits, bread and waffles.

She may not know how many thousand cans of Karo are used in her home state, but she does know how often her own Karo pitcher is emptied. The forehanded housewife buys Karo by the dozen and keeps it in the pantry ready for the daily filling of the syrup pitcher.

CORN PRODUCTS REFINING CO.

Dept. 110 NEW YORK P. O. Box 161

The New Crop of DRIED BEET PULP Is Now Ready



Last year the demand for DRIED BEET PULP far exceeded the supply. Many were disappointed. The same condition may exist this year. Right now the new crop is being harvested. Feed dealers are taking orders for both immediate and future deliveries. If you have never used DRIED BEET PULP you certainly ought to try it. You will be surprised at the results.

Increases the Milk Flow 2 to 5 Pounds a Day Per Cow

The feeding of DRIED BEET PULP produces a most gratifying increase in the milk yield. Fully three-fourths of the World's champion cows have made their remarkable performances with DRIED BEET PULP as an important part of their rations.

Keeps Cows Healthier

DRIED BEET PULP is the best possible insurance against udder troubles—off-feed conditions, and other digestive ailments. When it enters the cow's stomach it "swells"—absorbs 5 to 6 times its own bulk of water, loosens the entire mass, making it easy for the gastric juices to mix with all the food the cow eats. The loose, pulpy mass moves freely through the digestive tract, cooling and gently relaxing the bowels.

Does Not Affect the Taste of the Milk

Unlike beets and other roots, DRIED BEET PULP does not affect the flavor of the cow's milk. This freshly sliced and dried root feed is "like June pasture the year 'round." It adds juiciness, succulence and palatability to the ration and maintains both quality and quantity of milk production in a most surprising way.

May be Fed Wet or Dry and in Many Different Combinations

Some feed DRIED BEET PULP with roughage; some mix it with grain; some feed it dry; others moistened. In any case it is relished by the animal and produces surprisingly satisfactory results. For all localities—all conditions—and all seasons—it is truly "like June pasture the year 'round."

Speak to Your Dealer at Once

DRIED BEET PULP is a seasonal product. Dealers and dairymen have been waiting anxiously for the new crop. It's now ready. Orders are filled in rotation as received—they are pouring in for carloads from the old customers. If your dealer hasn't yet ordered, speak to him now.

Look for our Trade Mark and Guarantee on Every Tag

The quality of DRIED BEET PULP like any other feed stuff varies. For your own protection look for our trade mark shown above. It will be found on the tag of every bag containing the sweetest, cleanest BEET PULP you can buy. Ask your dealer for LARROWE'S DRIED BEET PULP and be sure you get it.

THE LARROWE MILLING COMPANY (26)
Gillespie Bldg., Detroit, Mich.
West orders filled from West Factories

New World's Champion of all breeds and all ages. Finnerie Pride Johanna Rue (Holstein) owned by Somerset Holstein Breeders Co., Somerville, N. J. was fed 10 lbs. Dried Beet Pulp daily while on test.

MOTHER'S "NOTIONS"

Good for Young People to Follow.

"My little grandson often comes up to show me how large the muscles of his arms are.

"He was a delicate child, but has developed into a strong, healthy boy and Postum has been the principal factor.

"I was induced to give him the Postum because of my own experience with it.

"I am sixty years old, and have been a victim of nervous dyspepsia for many years. Have tried all sorts of medicines and had treatment from many physicians, but no permanent relief came.

"I used to read the Postum advertisements in our paper. At first I gave but little attention to them, but finally something in one of the advertisements made me conclude to try Postum.

"I was very particular to have it prepared strictly according to directions, and used good, rich cream. It was very nice indeed, and about bedtime I said to the members of the family that I believed I felt better. One of them laughed and said, 'That's another of mother's notions,' but the notion has not left me yet.

"I continued to improve right along after leaving off coffee and taking Postum, and now after three years' use I feel so well that I am almost young again. I know Postum was the cause of the change in my health and I cannot say too much in its favor. I wish I could persuade all nervous people to use it." Name given by Postum Co., Battle Creek, Mich.

Postum comes in two forms:

Postum Cereal—the original form—must be well boiled. 15c and 25c packages.

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Beef Rings at Work

Members Tell How They Save Forty Per Cent on Their Meat Bills and the Best Size "Critter" to Use

WE HEAR quite a lot about "beef rings" from time to time, setting forth how better beef at a material saving in cost can be obtained through team work among groups of farmers who can grow and distribute the meat supply of the neighborhood.

These rings have never become so commonly in vogue but what they are the exception and not the rule in any locality.

Why have they not become more generally in use?

FARM AND FIRESIDE has succeeded in getting members of a number of these beef rings to speak right out in meeting. Here are the opinions of several members who are now or have been getting their meat supply through neighborhood beef-ring channels.

Draw Lots Blindfolded

By Frank Carbaugh

I have belonged to a successful beef ring for five years. We organized in the fall of 1910 with twenty members.

We built a little shop, centrally located, among our group of members and made an assessment of \$1.50 to meet building expenses. Each November we all meet at our schoolhouse and arrange for the number of beeves for the next year.

We place the names of the members in one hat and twenty numbers in another. We blindfold one member and let him reach one hand in each hat. The name and number he draws out go together. For example, number one furnishes first beef; number two, second, etc.

We furnish nothing but young beef, about fourteen months old, grain-fed for about four weeks before killing time. The beef must weigh about 550 pounds on foot.

We pay a member of the ring \$3 to kill the beef Monday evening, and to cut it up Tuesday morning before daylight. He divides it into steaks, roasts, and boiling pieces, which are placed in twenty different piles.

Each member goes to the shop or sends with someone for his 12 pounds of meat each week for twenty weeks through the summer months, commencing about the second week in June.

Two or more rings can use the same shop.

Is Out, but Sorry

By John Norton

I belonged to a beef ring for three years altogether, and shall tell you how we made it a grand success.

There were twenty to twenty-four of us in the ring, and we butchered a yearling every Friday evening. One of the members did the work of dressing and cutting up the beef for \$1.50. He also kept the club books.

We each had three pieces of meat priced as follows: Steak, 10 cents; rump roast, 8 cents; neck and rib pieces, 5 cents a pound.

The round was cut in as many slices as there were members in the ring.

The owner of the beef animal had to wait for his share of the meat until the club members had all they wanted. The remainder the owner could dispose of at market prices or at club prices, as he preferred.

We paid no money until the last beef was butchered, then we settled with the bookkeeper.

We had fresh beef all summer at practically the actual cost of raising it.

We met at each member's home to butcher up the meat.

I only wish I belonged to a beef ring at the present time.

Quality of Animal Important

By H. A. Cross

I have tried the beef-ring plan of getting fresh meat, but on a small scale—only two or three neighbors were in our ring.

Properly conducted—if that is possible—this plan would solve the problem of getting good fresh meat for farmers the year around.

Our ring, being so small, was not able to accommodate the members with a steady supply of meat.

We learned, however, some important things about insuring a good meat supply. Among these requirements are the following:

The beef animal, if stall-fed, must have a ration well adapted to rapid fattening from start to finish.

To insure this, the feeding and watering must be as regular as clockwork, every day, week in and week out, Sundays included.

Not only must the feeding be right, but the animal must be kept clean and comfortable and as quiet and lazy as possible.

Never allow the animal to become excited or scared; neither should it be overheated at the time it is butchered.

All these points have an important influence on the flavor and the quality of the beef.

Good Meat at Eight Cents

By P. C. Henry

I belong to a co-operative beef ring and we are generally well pleased with the results. How else could we receive about 20 pounds of fresh beef every week at the low cost of 8 cents a pound? An organized plan is the only way for a number of farmers to supply themselves with fresh meat in the summer by slaughtering the yearling steers they have raised.

The week before we started our beef ring I bought about 10 pounds of mixed beef from a party and had to pay 14 cents a pound. Now we get it regularly at 8 cents, or practically at cost.

There is nothing complicated about this system of neighborhood co-operation, for it is co-operation pure and simple. This beef ring is exactly the opposite of the beef trust. It consists generally of eight neighboring farmers. Each farmer who forms part of the beef ring raises a yearling, preferably a steer, for the purpose, and seeks to have it in good condition for the date of slaughter so that it will dress at least two hundred pounds.

On Friday afternoon the members meet at the home of the party who furnishes the steer for slaughter. It does not take long to slaughter and dress the animal. Then the fore quarters are divided up as evenly as possible into four parts. Likewise the hind quarters. The member who furnished the animal for slaughter gets the hind quarter cut that week, but the following week he gets the fore quarter cut; thus each member alternates with fore and hind quarter cuts every other week.

It will be seen that the system is very fair, no one member being allowed any advantage over another.

One member is elected secretary to keep account of the number of pounds each member receives weekly. At the close of the killing season the member who furnished the largest animal pays 8 cents per pound for the difference in weight between what he furnished and what he received.

The hide is carefully preserved and sold at 13 to 15 cents a pound, which income belongs to the member who furnished the animal. The head and lungs are sold to dog trainers near-by for two bits, while the tallow is rendered by the member who furnished the steer, and is kept for family use.

The darkies on the place are glad to lend a helping hand in the work in return for the paunch, the heart, and the kidneys. The paunch is converted by them into palatable tripe.

So it will be seen that not any part of the carcass is wasted, and through co-operation each member of the beef ring is assured of fresh beef at cost during the summer, when it would otherwise be impractical to get it at a reasonable cost.

Heifer Beef Preferred

By James H. Williams

We have no beef ring in our community now, owing to the fact that we have a good cold-storage plant near us where fresh meat can be stored and secured in good condition. But the beef ring was operated successfully many years before the cold-storage accommodations were available.

Here is the plan followed in our beef ring: Eight of the neighborhood farmers would get together, select the best butcher from their number, and also select the best place to do the butchering.

The farmer selected was generally appointed bookkeeper.

The order in which the members were to kill was also decided upon.

In our beef ring, heifers weighing between 500 and 600 pounds on foot were generally used for beef.

The member allotted to furnish an animal brought it to the place for slaughtering the night before killing. He also came the next afternoon to assist the butcher. The beef was dressed and divided into eight shares. Each member had a card containing his name, and the assistant butcher divided the beef into shares in accordance with the rules provided for the division, and marked the

respective shares with the member's card. The shares were all weighed and booked, and at the end of eight weeks the account reckoned, and if any member got more beef than another, or one killed a larger beef, they were settled with in accordance with the rate per pound decided on at the first meeting.

When one family could not use a whole share, they got a partner and divided the share, or rather the butcher divided it for them. The farmer who killed the animal got the hide and heart, etc., and also paid the butcher \$1 for his work.

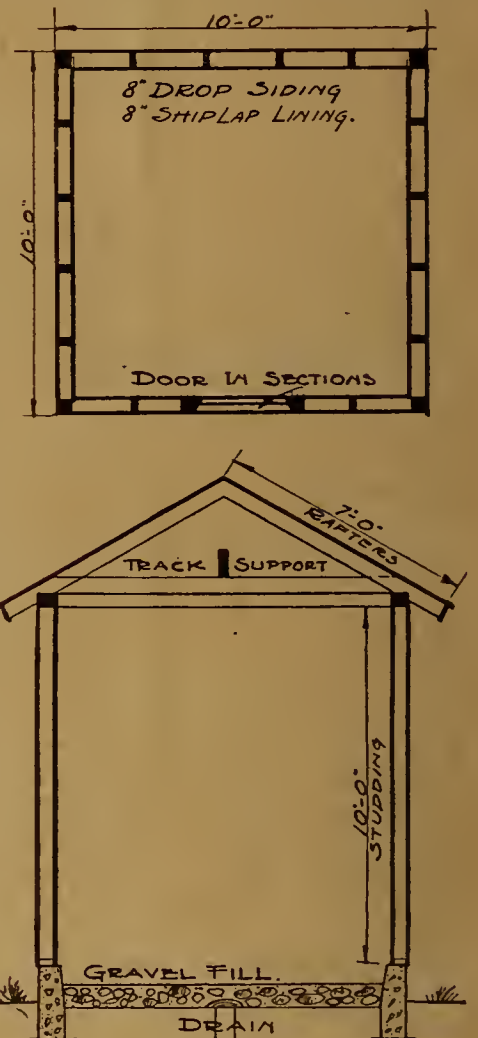
Ice House for \$56

By W. E. Frudder

FOR about \$56 most any lumberman will furnish all the materials needed for this 10-ton ice house. Any man with a saw, hammer, square and level can build it. A 20-inch concrete foundation wall, six inches thick, will support it.

The outside dimensions of the house are 10x10 feet. Remove all the sod and loose dirt from the inside of the 10-foot square and fill it with gravel about six inches deep.

If coarse gravel is available, a five-to-one mixture of concrete well tamped into the 20-inch wall will give good results. Have the top edge of the forms straight and level and fill even with a wet mix. Iron studding sockets are then placed into the concrete. They have long claws and the concrete holds them firmly. Set them two feet on centers along the outer edge of the wall. The studding is 10 feet long with a double 2x4 plate around the top. It is best to frame each of the two opposite sides first, before being raised. A double plate is used so as to be lapped over the corners, and a 2x6 tie brace across the center and on the sides stiff-



ens the building against any outward pressure and keeps the building plumb.

Two-by-four rafters placed two feet on centers support the roof.

For the outside of the building eight-inch drop siding makes a neat finish. Nail this in a horizontal fashion, starting at the bottom. In the center of the front side provide a two-foot door 10 feet high and built in three sections from six-inch flooring lumber. To keep the sawdust from pressing against the doors, short pieces of two-inch plank are cut to fit in across the inside of the door opening.

An inside lining of ship-lap lumber is nailed to the inside of the studding, thus providing for a dead air space in the wall. A dead air space is not absolutely necessary in a farm ice house, but it saves ice wonderfully in hot weather.

About 350 cubic feet of ice, equivalent to 10 tons, are stored in the center of the building in a seven-foot cube. Surrounding this ice cube on all sides is a sawdust filling of from two to three feet in thickness, so that the warm air from the outside, or even from the soil beneath, will not harm the ice supply. The building had best be placed on a high, well-drained place and a line of tile set to carry off the meltage.

One valuable though not necessary addition to this plan is an overhead track equipped with carrier and ice tongs, for making the ice handling easier.



Crops and Soils

Corn: 110 Bushels

By A. A. Burger

ONE hundred and ten bushels of corn were raised by M. L. Bowman on an acre of land in Blackhawk County, Iowa, last year. The land was not manured, received no special treatment, and was plowed and planted the same way as thousands of other acres in Iowa. The corn was cultivated four times during the season.

This acre of corn won \$200 in cash as the best acre of corn in Black Hawk County in yield, type, and quality. Seventy bushels of the 110 bushels were good enough for seed corn. Fifty bushels of the corn were sold for \$5 a bushel. A ten-ear sample of the corn, in competition with 550 other samples raised by more than one fourth of the farmers in the county, won second place for type, quality, and maturity.

In a field adjoining the acre were growing two varieties of corn on the same soil, planted and cultivated the same, growing under the same conditions. One variety yielded 60 bushels an acre and the other variety yielded 80 bushels an acre. This was the average for the entire field.

The seed used in planting the prize acre was the secret of Mr. Bowman's success.

Two years ago, while judging corn at a local institute, Mr. Bowman came



One hundred and ten bushels of corn were produced by this one-acre field in Blackhawk County, Iowa

across a variety of corn that, from the standpoint of type, quality, and maturity, favorably attracted his attention. He believed "good seed always tells," and having purchased a farm near Waterloo at more than \$200 an acre, he decided to try some of this corn. Upon inquiry he found all the seed of this variety was sold, but he was persistent, and finally made arrangements with a farmer growing the same variety to allow him to pick what he needed from the crib for \$2.50 a bushel. He picked 20 bushels, and by the time he had paid his help for picking and livery the corn had



Fifty bushels of these seventy bushels of seed corn taken from the prize acre sold for \$5 a bushel

cost him more than \$5 a bushel. Mr. Bowman put every ear on test, and as a result rejected half the seed corn, making it cost him about \$10 a bushel.

But he did not stop here. Out of this corn he picked 100 of the best ears and

planted them, three kernels to the hill, on the prize acre, and the acre produced 110 bushels of corn.

Crude-Oil Engine

ONE of the most interesting developments in small gas engines is one which operates without batteries, magneto, or any other ignition system. Neither has it a spark plug nor a carburetor, nor any preheating arrangement. It runs on a heavy crude oil, and can use either a lean or a rich mixture.

The charge is exploded simply by the heat of compression, and three or four revolutions in cranking starts it off even in cold weather.

The most notable advantages which this engine claims are exceptional economy in fuel and simplicity in design. A 2½-horsepower size costs \$100 and a 4½-horsepower sells for \$180. The engine carries a guarantee for one year. The style, though new in this country, is said to have been used extensively in Europe, and the economy of operation seems to offset the rather high first cost.

How Long Seeds Live

IT DEPENDS upon the seed and the way it is stored. Eastham, a Canadian, has tried out a great many seeds which have been kept for long periods. Half of ten-year-old timothy seed grew, and a little less than half of the alsike and red clover. Oats stored for thirteen years grew about as well as when they were freshly threshed.

Plowing Kills Quack

PLOWING is often accused of spreading quack grass, but here is a way in which you can kill it by plowing, according to W. E. Taylor, the crop expert.

"The best way is to plow it with a broad sharp-shared plow, having a long slanting mold board. It should be plowed when the ground is dry and the weather hot, at a depth of not more than three inches. If all the roots are cut off clean and the furrow slice is inverted, the hot sun will kill the roots."

The roots depend upon the tops for their sustenance; and if they are cut off, the roots will perish. If when plowing, however, a few roots are left when the slice is turned, enough nourishment will be carried down and distributed to maintain life in a great series of connecting roots.

The writer has talked with farmers who have plowed quack grass under and claimed the plant would not die. This is because all the roots were not severed.

New Sources of Potash

A FLORIDA gentleman has written to several farm papers and magazines suggesting that off the coast of Florida a thousand miles or so is the Sargasso Sea filled with half-rotted seaweed from which could be obtained all the potash fertilizer needed in spite of the shut-off of the German supply. The Bureau of Soils expresses the opinion that this supply is overestimated both as to extent and the amount of potash in it; but that the great seaweed beds in our Pacific waters might be made to yield plenty of potash. Professor Udden of Texas seems to prove that there exists a fair probability that we have in the panhandle of Texas potash mines a good deal like those of Germany. Anyhow, several wells bored for oil have passed through deep deposits of potash-bearing salts. Over in the Great Basin, in Arizona, Nevada, and Utah, the government geologists have discovered potash deposits not very easy to get at, and of questionable richness. But in Spain potash mines have recently been found which a French technical expert declares are not only rich enough to compare favorably with the best German deposits, but which "have the advantage of being more easily accessible."

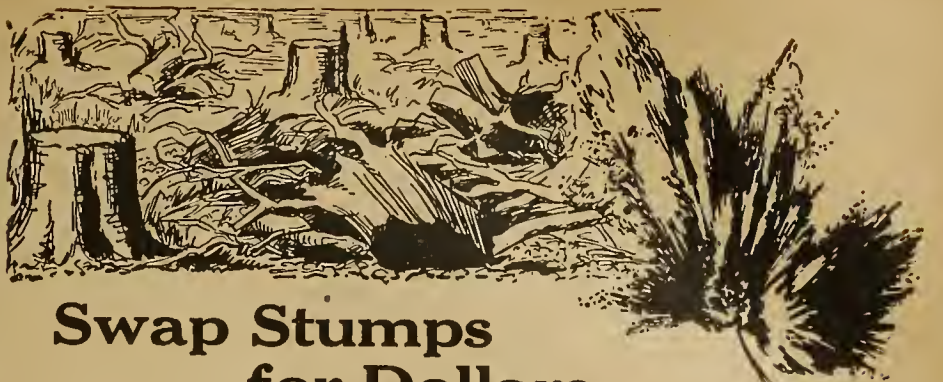
Those German deposits are rather inaccessible just now!

It's rather a hard old world in which to corner any natural product. We shall certainly not lack for potash in future years, whether the Kaiser sells or not.

Why Wet Land is Cold

C. G. HOPKINS, soil expert, says that five times as much heat is required to evaporate water from the surface of a soil as would be needed to raise the temperature of the same amount of water from the freezing to the boiling point. This explains why wet and poorly drained soils are cold.

Tile drainage removes the excess of water. Then the heat of the sun is able to make some headway in warming the soil. But if the soil is continually saturated with water the constant evaporation keeps the temperature down in spite of the sun's warmth.



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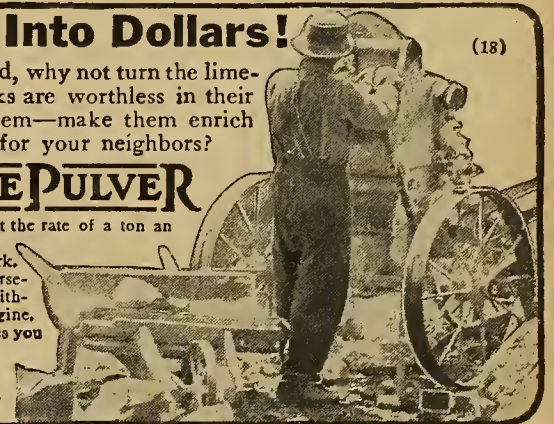
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Live Stock—Dairy

Foot-and-Mouth Cures

A BOSTON friend has written us several letters claiming that he has a cure for foot-and-mouth disease which never fails. What he has, however, is a cure for a disease called "mycotic stomatitis," which is not contagious but looks very much like foot-and-mouth disease.

His remedy is the administration of a large tablespoonful of flowers of sulphur in the feed of each affected animal twice a day, with the following outward treatment: Keep the floor clean and sprinkled with air-slaked lime, wash the animals' feet in warm soapsuds, and apply blue vitriol either powdered or in solution to the feet. This treatment should be kept up for ten days.

The veterinarians have been familiar with this treatment for mycotic stomatitis for many years, but they say that it will not have any effect on foot-and-mouth disease. We do not expect our Boston friend to accept this statement; but we believe the veterinarians, who—especially those employed by the Government—would almost give their own feet and mouths for a real cure for the disease which would also be a preventive of its spreading.

There is no question, however, that foot-and-mouth disease is curable. It is not a very severe disease so far as fatalities are concerned. The serious nature of the pest grows out of the fact that while it is raging it knocks the profits out of the cattle, swine, and sheep business, and bankrupts the stock-raising community. It makes feeding and stock-raising a losing game, and is therefore much more serious than would be a trouble which would kill a quarter of the herds outright and stop there. Like gripe or bay fever in the human race, it stays with us year after year, and it breaks the stockman's back.

Loeffler Treatment is Too Expensive

Great Britain has always pursued the method we use in this country of stamping it out, and has found that method a success. Our Government is using the same methods, and it is hoped improving on them.

German berds, on the other hand, have become so rotten with the disease that the Government has given up in despair, because to kill the infected stock and pay for it would bankrupt the empire. If we are not successful in the stamping-out method we shall come to the same horrible condition, and every farmer should take serious thought of the impending danger.

In Germany—in some regions at least—when foot-and-mouth disease breaks out, all the well animals in the infected herd are at once infected by drawing through their mouths a rope which has been passed through the mouth of a sick animal. Thus the herd is all put through the trouble at once, the stockman takes his loss, and it is over with for a little while.

If the lime-blue-vitriol treatment were what our Boston friend thinks it is—a cure—the efficient Germans would use it, and not the infected rope. The Germans also have perfected the Loeffler vaccine treatment for it, but it is so expensive that it cannot be generally adopted.

We must face the danger and watch for the disease. We must help the Government in the stamping-out campaign. Owing to the fact that the quarantine has not been rigidly enforced or righteously obeyed, the plague has spread to nearly 200 Illinois farms after it was supposed to be eradicated. "Remedies" like that proposed will only divert our minds from the task in hand and raise false hopes. They may, therefore, do infinite mischief.

Cactus-Fed Cattle

CACTUS, or prickly pear, has the name it goes by in the Southwest, has been found a good feed for dairy cows. The Government has investigated its merits and drawbacks with these results:

It responds to cultivation, and after two years' growth from old roots will yield as high as 100 tons per acre with an average of about 40 tons. In a Texas experiment, steers required 55 pounds of prickly pear and 2½ pounds of cottonseed meal to make 1 pound of gain.

When planted artificially and cultivated, cactus does well in rows 8 feet apart with the plants 30 inches apart in the rows. Planting the rows 6 feet apart was found to be too close for convenient cultivation on account of the rapid growth of the cactus.

Dairy cows fed prickly pear singed in the field with a gasoline torch (to burn off the spines) gave more milk than cows receiving an ordinary ration, but the milk was lower in butterfat. Prickly pears are exceedingly succulent. They had no influence on the flavor of milk or quality of butter. Nor, as has been the belief of some dairymen in southern Texas, did the prickly pear injure the keeping quality of milk.

The cost of burning the spines off the "pears" was found to be about 50 cents per ton. One and two-thirds gallons of gasoline and fifty minutes' time were needed to singe one ton. A cheaper way is to burn the spines off over a brush fire, but this is practical only when small amounts are fed.

The spineless variety of cactus has about the same feeding value, but is less bardy and is not so extensively grown.

Keep Cross Bull Quiet

By M. S. Reed



HERE is a contrivance to put on a bull to keep him quiet, make him less dangerous, and keep him from jumping over or tearing down fences.

Take a thin steel buggy tire, one partly worn and light; turn an eye at one end to pass through the ring in his nose. Let it swing free about twelve inches from the ring.

Then bend a hook at right angles to project outward four inches, curving it so as to slide along the ground easily when he is grazing. I have tried it on two bulls and it works to perfection.

The Money in Manure

CATTLE MANURE, according to competent authorities, is worth a few cents more than \$2 a ton, horse manure about \$2.25 a ton, hog manure \$3.25 a ton, sheep manure \$3.30 a ton, and chicken manure \$7.

As a rule, the manure produced on a farm is the cheapest fertilizer obtainable. The best way to get full value from it is to spread it directly on the land soon after it is produced. The land then gets all the benefit from manure-leaching.

Six Crops of Alfalfa

By S. E. Cress

I HAVE been experimenting with alfalfa some ten or twelve years in a small way, trying to determine whether the same can be grown successfully on the ordinary prairie soil of this region—southwestern Illinois.

In the month of August, 1912, I sowed a small patch—exactly two square rods—in my garden. Having cultivated the ground thoroughly for some time previously, and inoculated the same with soil from an alfalfa meadow, I planted the seeds in drills about ten inches apart—just as I would plant radishes or beets. I secured a good stand and the plants made a fair growth during the remainder of the season.

The following season (1913) I harvested five crops and last season, perhaps the hottest and driest ever known in this section, I harvested six crops, taking off the first May 21st and the last October 26th.

No cutting was made until the plants had begun to bloom or new shoots had started up from the crowns. Each cutting was nicely cured and, when dry enough to store away, carefully weighed. The total season's crop weighed 163½ pounds, or at the rate of 6 tons 1,080 pounds an acre.

This hay was the pure stuff, there being no weeds, grass, or dirt to add to the weight. These crops were made without the aid of lime or any commercial fertilizer, and without water in any form except that provided by nature.

The alfalfa grew right along while the corn just across the walk was burned up by the drought and hot winds, and the grass in the yard was brown and dry. Each time when a crop was taken off I went over the patch with a garden plow—one furrow to each "middle." Two or three times during the season I gave it a light coat of compost from the poultry yard.

My object in planting the seed in drills was to facilitate the process of cultivation, and were I going to grow alfalfa on a larger scale, I should plant the seed with an ordinary grain drill, or sow broadcast and plow it in with a drill in order to have the plants in rows. I

should then use the same machine for cultivation, or perhaps some kind of a cultivator with small points set the right distance apart to match the rows.

I am convinced that with well-drained soil and thorough cultivation alfalfa may be grown successfully on any of our ordinary prairie or upland soil.

I have already harvested two crops off this patch this season, cutting the first May 17th and the second June 24th. The aggregate weight of these two crops is 91 pounds, or at the rate of 3 tons 1,280 pounds an acre. If every farmer in this region had grown from five to twenty acres of alfalfa last season, thousands and thousands of dollars would have been saved to this community.

Serum Saves the Hogs

THE Nebraska Extension News Service makes mention of the fact that the county agent of Madison County saved 438 hogs last year by giving them the anti-hog-cholera serum treatment. Of the 504 vaccinated, 194 had high fever. Only three out of a hundred died when treated before they had the fever. Of the others 28 out of every hundred died. He vaccinated an average of about ten hogs a week. Many other agents are doing similar work.

IN THE vicinity of Mobile, Alabama, a campaign is on to get rid of the cattle tick. A dipping vat has been built the use of which is free to all live-stock owners on certain days. There may be an idea in this for all neighborhoods. Why not a community dipping tank, for cattle, swine, and sheep? One would do for many small farms.

South Raises Pork

IF THIS picture in any degree represented the interest of the South in pork production, the fact that cotton this year has been a difficult crop to handle would be of little consequence. The South is turning to stock-raising, and



this large specimen does represent the enthusiasm of farmers there. This particular hog was raised and killed in Louisiana. He dressed 480 pounds and sold for \$48.

Building Michigan Roads

THE concrete in a Wayne County, Michigan, road was proportioned one part of Portland cement, one and one-half parts of sand, which was graded from one-fourth inch down, with the dust out, and three parts of gravel, graded from one-fourth to one and one-fourth inches.

The concrete was mixed with a batch mixer which moved under its own power. A boom attached to the mixer carried a bucket into which the concrete was dumped direct from the mixer. This boom swung in a semicircle, and was long enough to allow the concrete to be deposited direct from the bucket in the place on the road.

To hold the concrete along the side of the road, a 2x8-inch plank was staked firmly to the line and the grade. The upper edge of the plank was protected by an angle iron. A strike-off templet, made from a 2x8-inch plank cut to the proper crown, and with its lower edge steel-bound, was moved along the top of the side forms. This was followed by a heavy 2x8-inch plank box templet-tamper, which also traveled on the top of the forms. Two finishers with wooden floats worked from a bridge supported on the side forms.

The side forms provided a track upon which to rest all of the necessary tools to shape and finish the concrete. By the use of these tools and the bridge, all labor was kept off of the road during the placing and the finishing of the concrete.

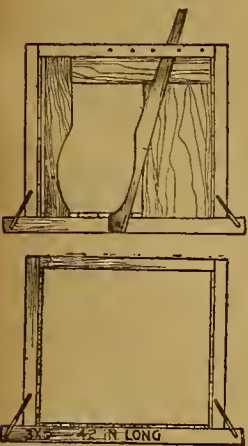
Before the concrete hardened, the forms were removed, the edges beveled by breaking them with a shovel, and the surface was broomed—brushed with a heavy stable broom. The edges of the road were broken to remove the abrupt edges and to better join the road with the shoulders. The surface was broomed to roughen it.

After the concrete was hard enough to bear the weight of a man, the surface was covered with two inches of sand and earth, and was sprinkled with water several times a day for a week. All travel was kept off of the road for a period of two weeks.

On each side of the road a gravel shoulder eight inches deep was built. It varied in width from two to four feet. Trolley tracks are along one side of the road. Between these tracks and the road a longitudinal concrete tile was laid. On the other side an open ditch was dug. The cost of the concrete in place was \$1.47 a square yard, or \$13,797 a mile for the 16-foot width, and \$17,256 a mile for the 20-foot width.

Crate for Ringing Hogs

By Louis Werth



TO MAKE a simple and practical crate for ringing hogs, make two frames as illustrated—one for the front and one for the back of the crate. Then nail on them boards 4½ feet long, lining the inside but not the top. Make a lever to work in between two boards at the top with holes bored to receive a bolt and hold the lever.

When ready to ring your hogs, put the rear end of crate up to the pen and drive one hog out at a time. When it puts its head between the lever and the boards, pull the lever and put the bolt through the hole to hold it while you ring your hog. Then let the hog go through, drive another in, and handle the same way.

How Animals' Minds Work

By David Porter

PERHAPS you have known a man who had the experience—or maybe you have even had it yourself—of building a nice row of nests in the chicken house and then having the hens refuse to lay in any of them.

All animals, hens included, have peculiarities, and to obtain the best results in working with them we must take this fact into consideration. Not only is it true that each class of animals has its peculiarities, but individuals in the same class have their distinctive traits. To illustrate this, take for example two horses. One is a heavy work horse, and when you speak to him it is quite a while before he obeys. Yet he may be as willing and obedient as the other horse which is of driving stock and quick in its thoughts and actions. In fact, it is wrong to both to drive such horses together.

We are often inclined to think animals stubborn or disobedient when the fault lies with ourselves. One instance of this is carelessness in the language we use in addressing them. A cow has a limited comprehension, but by careful teaching she may be made to understand what "stand over" means, and with a little urging she will stand over. When she has learned this much, don't you think it must be something of a "facer" to her to be violently told to "get around" or to "go on"?

There's no use in teaching a cow all three of these, because they simply confuse her. It is like the case of certain savage races which, it is said, never can be taught to count beyond seven. Your cow can't be taught to count beyond one when it comes to using different words to signify the same things.

No Wonder Horses are Puzzled

Speaking of the limitations of animal intelligence, did it ever occur to you how really wonderful a thing it is for a horse to be able to distinguish quickly and unfailingly between "gee" and "haw"? When we reflect that a person must often mentally go through the process of facing north before being able to distinguish between right and left, we must have greater respect for the horse. Think of understanding a vocabulary containing such compounds as "gee-haw," "wo-hup," "wo-haw-short," "wo-haw-long" (whatever that means), "steady-haw," "steady-hup," and a few others. While I am willing to admit that some horses understand a surprising number of these, and can also interpret several new ones in-

vented on the spur of the moment, a great many horses must be puzzled at times.

A horse, like a well-intentioned person, is naturally adverse to getting into a fight with anyone. He feels as much embarrassed as you do. Stop before he discovers two things—your inability to do as much as he has feared, and his own temper. It is what you lead him to think you can do, rather than what you can do, that enables you to manage a horse.

Bossy and Biddy are perhaps the two animals whose disposition will most quickly affect their owner's income. Both abhor excitement. They are afflicted with "nerves," and cannot stand noise or quick movements. What benefit to feed Bossy correctly if we so worry her that she doesn't give the milk she has the physical capacity for producing. Promptness at meal time and promptness at milking are other things which, if ignored, act to the disadvantage of the owner.

Who has not heard that one person is able to obtain more milk from a cow than others? A cow makes a large part of the milk while the process of milking is going on. This process is evidently one into which the mind and nerves enter, and if we induce in the cow a spirit of perfect contentment it is natural enough that she would relax the muscles which are concerned in milk manufacture and give more than her normal amount of milk. On the other hand, allowing her to be milked by an untactful person, or one who is so slow as to try the cow's patience, gives an entirely different result.

Dogs Forgive and Forget

A man should have a certain sympathy, if I may put it so strongly, with the mental processes of the animal with which he strives to make money. For instance, a man who does not like ducks would very likely make a poor figure at duck-raising.

A dog feels an injury keenly, but does not carry hard feelings. Horses can also feel hurt. Cows are sometimes angry.

Animals have definite feelings toward each other. Horses are usually tolerant of new stock, but are inclined to be playful. I could never quite understand why a desire to show friendship by a sound kick should be such a desirable trait in the equine race as to be preserved by evolution, nor why the complimentary trait of inviting a kick by nipping at another horse should be preserved either. Cows demand that the newcomer present full credentials, and also show whether she can "boss" them or not. Her status is not finally established until it has been determined which ones she can boss and which ones can boss her. Even then her rank is only tentative, and is subject to change without notice if she does not defend it.

Milking Shorthorns Win

IN a series of dairy tests carried on by the English Royal Dairy Show, in which all the breeds known as milkers were entered except the Brown Swiss, the Shorthorns carried off the prize of a sweeping victory over all breeds. Five cows scored 80 points or better. Of these two were Shorthorns, one was a Lincoln Red Shorthorn, and the others Red Polls.

THE American Trotter is pronounced by military men who have used him as the best of all cavalry steeds. They are better than the Thoroughbreds or any grades.

IN SHETLAND and Iceland dry salt fish are fed to cattle, sheep, and horses. While not as good for cattle as the more common feeds, hogs fed on fish are described as "fat and well-ripened."

Sore Mouth in Hogs

THERE is a sore mouth in hogs which is infectious. The upper lip and nose will get spongy, raw, and bleeding. The animal often develops a fever. Such cases should be separated from the herd, and treated with permanganate of potash at the rate of an ounce of the permanganate to a gallon of water—used as a wash once or twice a day until recovery. This sore mouth is a filth disease, and if the conditions of filth are removed the disease will be checked.

Sterilizing Milk

MILK can be sterilized by electricity. At the University of Liverpool (England) it was found that by the use of electricity the number of bacteria is reduced greatly, all the colon bacilli—the bacteria of bowel troubles—and their allies are destroyed; all the tuberculosis germs are killed; no chemical change nor change in taste is made in the milk.

Your Hogs

Rid Them of Worms—Like This

Worms are responsible for nine-tenths of all your hog troubles at all seasons of the year, but especially in the fall. Now don't be misled, thinking your hogs have some other ailment. Nine times out of ten it is worms. My Stock Tonic will positively expel these worms—it will keep your hogs in a healthy condition, thereby enabling them to resist disease and lay on fat. Pay particular attention to see that your brood sows are free from worms, so that the litters will turn out healthy and vigorous. Feed my Stock Tonic to your hogs right now to expel the worms and to your horses, cattle and sheep to keep them in good condition while they're on dry feed.

For every two hogs put one tablespoonful of Dr. Hess Stock Tonic in the swill twice a day and I guarantee it will get the worms.

Dr. Hess Stock Tonic

A Fine Conditioner and Worm Expeller

25-lb. pail, \$1.60. 100-lb. sack, \$5.00

It will put your horses, cows and sheep in a thriving condition, make the ailing ones healthy, and if your hogs are wormy, put one tablespoonful in the swill twice a day for every two hogs, and I want to tell you that it will be good-bye to the worms. 25-lb. pail, \$1.60; 100-lb. sack, \$5.00. Smaller packages as low as 50c (except in Canada and the far West and South).

My Stock Tonic is highly concentrated, as the small dose quantity will prove; and as I have no peddlers, wagons and horses to pay for I am able to sell my Stock Tonic through a reliable dealer in your town at rock-bottom prices.

Why pay the peddler twice my price?

Dr. Hess Dip and Disinfectant

One Gallon makes 70 to 100 Gallons Solution

One gallon can, \$1.00; smaller packages as low as 25c

A powerful disinfectant and germ destroyer. Use it around your hogpens, stables, poultry houses, outhouses, troughs, garbage cans, drains, etc. It sure does kill lice on hogs, prevents skin and parasitic skin diseases. Remember, the germs of disease are often carried from farm to farm—use Dr. Hess Dip and Disinfectant to destroy the germs and keep away foul odors. Sold in pint bottles, quart and gallon cans. Buy from the dealer in your town—under this guarantee:

So sure am I that Dr. Hess Stock Tonic will expel the worms from your hogs and keep your stock in sleek condition, that Dr. Hess Dip and Disinfectant will destroy disease germs and foul odors, that I have authorized my dealer in your town to supply you with enough for your stock, and if these preparations do not do as I claim, return the empty packages and my dealer will refund your money.

Dr. Hess Poultry Pan-a-c-e-a

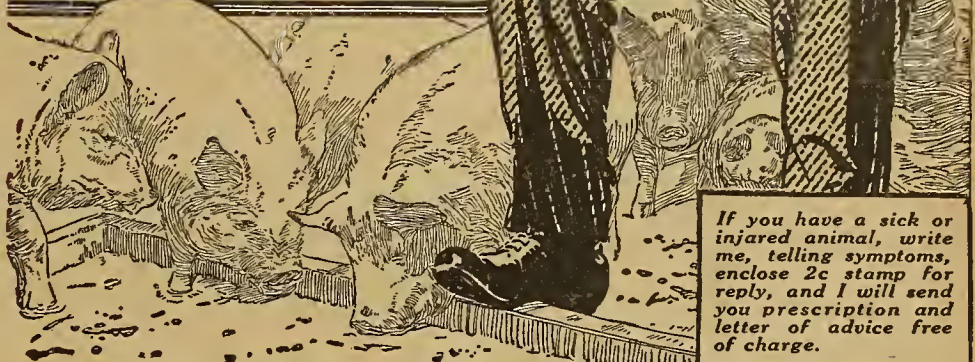
Tones up dormant egg organs and helps to make hens lay. Economical—a penny's worth enough for 30 fowl daily. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail, \$2.50. Except in Canada and the far West.

Dr. Hess Instant Louse Killer

Should be used freely in the dust bath for poultry. Destroys lice on all farm animals. Sifting-top cans 4 lb. 25c; 3 lbs. 60c. Except in Canada and the far West.

Write for my free stock book.

DR. HESS & CLARK, Ashland, Ohio

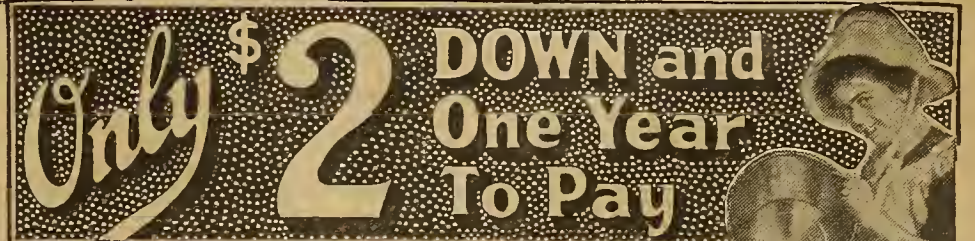


If you have a sick or injured animal, write me, telling symptoms, enclose 2c stamp for reply, and I will send you prescription and letter of advice free of charge.



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Patented One-Piece Aluminum Skimming Device, Rust Proof and Easily Cleaned—Low Down Tank—Oil Bathed Ball Bearings—Easy Turning—Sanitary Frame—Open Milk and Cream Spouts.

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You can have 30 days FREE trial and see for yourself how easily one of these splendid machines will earn its own cost and more before you pay. Try it along side of any separator you wish. Keep it if pleased. If not you can return it at our expense and we will refund your \$2 deposit and pay the freight charges both ways. You won't be out one penny. You take no risk. Postal brings Free Catalog Folder and direct from factory offer. Buy from the manufacturers and save half. Write TODAY.

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Save High Lifts. Built low—wide tires prevent rutting. —light draft—save work and repairs. Write for free catalog of steel wheels and wagons.

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Backs This Hertzler & Zook Portable Wood

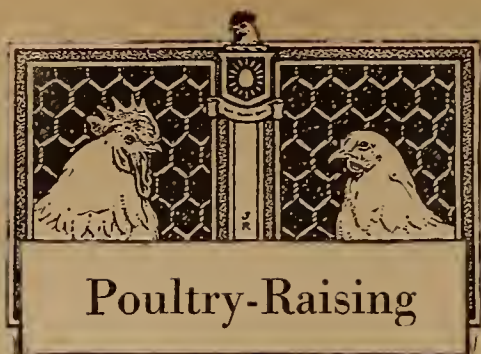
This is the cheapest saw made. Only \$7.90 saw frame to which a ripping table can be added. Guaranteed 1 year, money returned and all charges paid if not satisfactory. Write for catalog.

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Working the Incubator

MONEY locked up in incubators loafs on the job too much of the year. Why not put out hatching boxes to test seed?

Incubators furnish almost the ideal conditions for testing the germinating quality of all garden and farm seed. In winter and early spring it is no easy matter to hold the temperature and moisture of the seed-testing trays just as we want them. The incubator does the trick and stays with the job.

Turkey Dividends

By Mrs. Lena Bader

MY FLOCK of 62 young turkeys were the progeny of four hen turkeys and one male.

I have the best success by using young, well-developed hen turkeys not over one year old, mated with a cock turkey two to four years old.

When the hens begin to lay I keep the eggs gathered frequently to prevent them from getting the least bit chilled, and

turned: For a flock of 200 to 250 hens, set posts or crotched poles at intervals to form an oblong enclosure 20x40 feet. For the roof use strong poles or scantlings to support a layer of brush. Or a roof scaffolding of old lumber can be used.

For the north side and east and west ends build up thick walls of straw firmly tramped into place, also cover the roof with the straw, topping it out like a regular stack roof. The entire south side is covered with poultry netting.

Curtains of burlap or other cheap cloth should be provided for occasional blizzards and storms in the colder latitudes, but there will be few days when the entire open front cannot be left unprotected in almost any climate.

Plenty of dry straw for scratching litter and a well-adapted feeding ration, with abundant fresh water daily, will make such a straw-stack shed a hen's paradise.

Such a shelter for layers need not cost over one dollar where poles and brush are obtainable and straw stacks are within reach.

How Would You Like It?

IF YOU were a respectable Rock, Wyandotte, or Leghorn hen and had painstakingly grown a fresh, fluffy coat of feathers, lubricated your egg machinery, and started into egg action for the winter, how would you like to be entirely deprived of a dust bath and in consequence your feathers became gummy and soiled so that you couldn't sleep o' nights for discomfort? Wouldn't your first move be to put on the egg brakes?

Now is the time to lay in store a dozen bushels of dry, dusty dust. If the dust is dusty, do it to-day.

Needed in the Fall



The same tractor that did the harvesting will operate husker, shredder, or grinder, and so get the crop ready for feeding

store the eggs in a box where they are covered with grain, and I turn the eggs daily.

I set as many eggs as possible at the same time, using turkey hens and chicken hens to incubate them; and when they are hatched and are strong enough, I turn them all over to the turkey hens.

No feed is given until after the poults are twenty-four hours old. The first feed is hard-boiled eggs mixed with a good standard commercial food and onions chopped fine. Dutch cheese is also mixed with their feed after a few days.

I also use a commercial turkey draft in their drinking water as long as the poults are kept on a limited range.

This plan of feeding and watering was followed with the 62 turkeys mentioned until the youngsters were four weeks old, when they, with the turkey hens, were given unlimited range and required no further feeding except a little at night to bring them home.

In this irrigated country (Colorado) there is always an abundance of grasshoppers and other insects on which the turkeys thrive until time for fattening in the fall.

To fatten them I feed heavily with corn for about ten days to finish them off.

Thus far I have not been troubled with any turkey diseases.

Shelters for Layers

HUNDREDS of farm poultry flocks will shiver and huddle on the roosts of cold, drafty excuses for poultry houses this winter and go on egg strikes until they are thawed out by the returning warmth of spring.

A considerable proportion of the owners of these flocks have conveniently at hand stacks of straw or corn fodder which, with a day's labor, a few poles, and some brush, would make a winter house for their hens that would be more comfortable than the majority of poultry houses costing \$50 or more.

Here is the way the trick can be

The poultry business is suffering from this "hand to mouth" policy of buying supplies. If chickens are to be given attention at all, allow them the benefit of an economic business proposition.

TURKEY RAISERS in the regions where coyotes cause losses are finding that little bells strapped around the turkeys' necks save a lot of their birds. The little bells cost only a few cents each.

Ducks as Egg Machines

THERE is no lack of evidence to show that ducks of good laying strain are high-gear performers as layers.

One issue of a corn-belt paper recently published the records made by nine small flocks of ducks for the four-month period from March 1st to July 1st. Here are their laying stunts:

Three ducks laid 264 eggs.
Four ducks laid 300 eggs.
Nine ducks laid 632 eggs.
Nine ducks laid 675 eggs.
Nine ducks laid 725 eggs.
Nine ducks laid 900 eggs.
Ten ducks laid 618 eggs.
Twelve ducks laid 927 eggs.
Thirty-six ducks laid 3,196 eggs.

This makes a total of 8,237 eggs laid by 101 ducks in four months, an average of 81.5 eggs per duck, or 20.4 eggs per bird per month.

Danger Lurks in Pan

HOW would you relish your favorite "tope"—coffee, tea, or milk—from a teacup or glass which remained on the table for a week at a stretch without washing? Bitter, acrid, slimy, greasy, you say? What about the poultry drinking vessels that are strangers to cleansing for a much longer period than a week?

Not only does the drinking fluid become putrid with decaying food particles from the birds' beaks, but manure, rubbish and filth are scratched into the vessels and germs of disease multiply in inconceivable numbers. Clean food and clean drink are half the battle against poultry diseases.

Don't force your fowls to drink from a vessel unless you would be willing to drink from it yourself.

CHINESE HENS are fed principally on rice. That is why the Chinese farmer can sell eggs at about a nickel a dozen and make a profit even though he pays his farm hands as high as 10 cents a day.

Comfort for Layers

ARE you sure the winter quarters of the layers and breeders are free of lice and disease germs? Better make doubly sure by cleaning all manure, rubbish, dust, and litter out of the houses, then spray the walls, ceiling, floor, roosts, and nest boxes with whitewash made thin and strained so that it will spray readily. This formula (government recipe) is one of the best:

1. 62 pounds (1 bushel) quicklime, slake with 12 gallons hot water.
2. 2 pounds common table salt, 1 pound sulphate of zinc dissolved in 2 gallons of boiling water.
3. 2 gallons skimmed milk.

Pour 2 into 1, then add the milk (3), and mix thoroughly.

Into each five gallons of whitewash mix one pint of crude carbolic acid and make sure that every crack and crevice is full of this disinfecting preparation. Incidentally the poultry house will be lighter and more cheerful for the biddies.

The house should be allowed to dry out for several days before the fowls are allowed to occupy it.

Lost People

ALVIN C. FAIN, or anyone knowing his address, is requested to write us. He is about 5 feet 7 inches tall, weighs 150 pounds; age twenty-seven years; has light hair and blue eyes; nearly gray. His last-known address was Edison, Hawkins County, Tennessee.

CAREY STULTZ of Highland County, Ohio, has been missing about nine years. Was last seen in San Francisco a short time after the earthquake by his brother James Stultz. Has brown eyes, dark hair; height 5 feet 9½ inches; slender. He was a soldier in the Spanish-American War, and had served in the regular army several terms. A relative is anxious to hear from him if alive, and from his friends in any case.

A young man calling himself Henry Harrison, and now thought to be dead, left Paris, Tennessee, about thirty-six years ago. At that time he was twenty years old. 5 feet 10 inches high, and weighed 180 pounds. Light hair, blue eyes, fair complexion, scar over right eye. He had letters from one Ella Jones.

His daughter, who may be addressed in care of FARM AND FIRESIDE, wants to find his people.

TURN-OVER TIME

When Nature Hints About the Food.

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"Then I commenced a trial of Grape-Nuts food, and was surprised how a small saucer of it would carry me along, strong and with satisfied appetite, until the next meal, with no sensations of hunger, weakness or distress as before.

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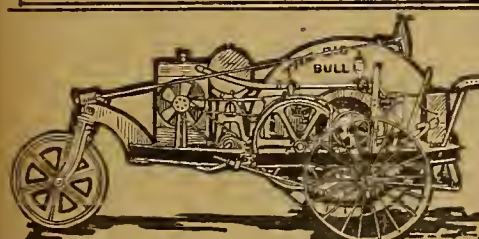
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Farm Notes

Tractors Farmers Want

FOLLOWING are the opinions of practical farmers on the subject of tractors. These men know pretty well what sort of tractors they want, and what they are willing to pay for them.

An old subscriber living near Litchfield, Illinois, writes:

"Our land is comparatively level, but rather hard when dry and difficult to plow. Farms average about 160 acres, and are usually cross-fenced in fields of 20 to 40 acres, so we need a tractor with plows that can be hoisted clear off the ground and the tractor backed to a definite line of starting.

"We cannot afford a large, costly machine. Tractors should sell for from \$350 to \$450, and such a machine should draw three 14-inch bottoms."

An Oklahoma man with a humorous mind has this to say about tractors:

"I have a tractor pulling a four-disk plow. The first week I didn't have much luck. I never handled a tractor before, and never used a disk plow. To make matters worse, the soil was very hard and dry.

"This farm has been farmed fourteen years and never has made a crop. I can't see that it's the fault of the soil. The ground never has been plowed over three inches deep, and in most places just scratched over.

"However, I have now finished plowing 54 acres. My plow weighs 1,200 pounds, and all the disks need grinding, but if the ground had been even in fair condition I should have been able to plow a thousand acres without grinding the disks.

"I am very much interested in a motor cultivator now, so I won't have to feed, harness, fight flies, or muzzle it. I am going to farm a half-section, putting 160 acres in corn, and if a cultivator-tractor will do the business I'll keep only one horse for buggy use, or buy a jitney and farm horseless.

"With my tractor I can now plow eight acres in ten hours, and look behind me at 7 P. M. and see that I've done something, and go to the house in good humor and not want to kill the cows and whip my wife and a dozen other things I used to feel like doing when I plowed with horses all day."

Power Cheaper Than Horses

This is what the manager of a farming tract in Ohio writes concerning his tractor requirements:

"My land is muck, and I must have a very light tractor. I tried one out, but it would not stay up. We are hauling out 50 bushels of onions to a load now with three-inch-tired wagons. If I can find a tractor that will stay up, I am convinced it is cheaper power than horses."

Here is another good letter, from a thoughtful farmer in New York State:

"I have been very much interested in machinery, and especially tractors, as I am thinking of purchasing one of the latter, but intend to know a great deal more about them. A man should study them at least a year or two before purchasing one. Many people make the mistake of buying a machine just because his neighbor has one. I have had a good deal of machinery, and have never bought a machine that did not work perfectly satisfactorily. I have a five-horsepower gas engine and a feed grinder which work to perfection together, and are the handiest and most profitable things on the farm. At first the engine bothered me a little, as I knew nothing about one, and now it is very seldom that it doesn't go at the first turn, summer or winter, right out of doors. We have a house for it which we generally take off when we run it, as it is pretty close quarters to handle the engine in it. It rests on the 'boat,' and goes wherever the engine does. We wouldn't be without the gasoline engine any more than we would without a mowing machine, and I believe the tractor will soon be with us also."

Wintering the Auto

THE length of time an automobile, and especially the tires, will last depends largely on the care they receive in winter.

The first thing to do is to support the car on blocks or jacks so there will be no weight on the tires.

Keep the room dark and well aired. Light and moisture have a bad effect on rubber. Change the air in the tires once a month, and when reinflating use only enough air to round out the tires.

Higher Up, More Gasoline

THE power of gasoline engines diminishes at high altitudes. In the Yellowstone National Park, opened for the first time to automobiles on August 1st of this year, 50 per cent more gasoline is required than for the same distance at lower altitudes. The altitude of the park roads is 7,650 feet. The Government sends out this message to tourists who expect to visit the park in machines.

Set Hooks for Strength

A FIVE - EIGHTHS - inch hook put in a wall right will hold more than a seven-eighths-inch hook put in wrong. At least so says a machinery company whose specialty is hay tools. Hooks for holding hay pulleys are subject to extreme strains, but it is usually the cross pull that breaks or bends a hook. They seldom pull out.

The same principle applies to hooks for holding any heavy article. Always point the hook in the direction of greatest pull. By this I mean the direction the pulley would take if suddenly released from the hook while under strain. In the sketches this is shown by the diagonal dotted line.



Right

First Aid to the Auto

By Gordon L. Horton

OF COURSE drops of water will always try to get on the bottom side of gasoline. Keep this in mind and drain the sediment bulb on the bottom of your gasoline tank at least once a month. One of the most perplexing troubles, unless it has happened to you before, is the freezing of water in the sediment bulb, preventing the gasoline from getting to the carburetor.

It does not often freeze perfectly solid, but allows just enough gasoline to seep through to keep the motor running jerky; sometimes it will stop. Then when you look things over and finally start to crank it again, enough gasoline has got through the frozen strainer to give a mixture, and right away you think of that warm dinner your wife has waiting for you and you start again with the throttle wide open, only to go the length of the car and then another dead motor.

You look in the gasoline tank: it is half full. You look for a loose connection: they are all tight. By that time you are ready to crank the machine again. It is ready to go, but only a little way.

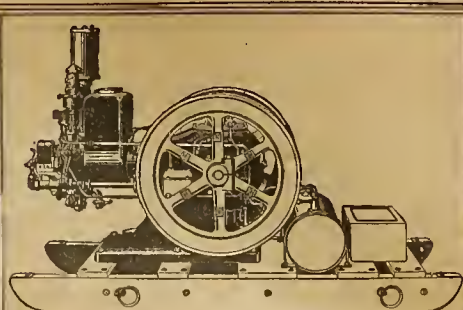
I know of men that have driven and repaired their own cars for years that have been puzzled for hours before finding the cause for this sort of motor action. This is the remedy: Take an old rag (a piece of waste, or even a handkerchief), hold under the drain cock to radiator until saturated with hot water, then immediately wrap it around the sediment bulb. Repeat this several times with the sediment-bulb drain cock open, and soon the water and gasoline will start. Let it run a short time, or until you are sure sediment bulb has been emptied of all foreign substance. This same trouble sometimes happens at the inlet needle to carburetor float.

Save the Clean Shirt, Too

One noise about an automobile is very deceiving. It sounds as though the cam shaft were sprung, causing the gears to mesh heavy at one place. This sound is more pronounced as you gain speed, but is not heard at all when car is at a standstill and motor running. Before getting the clean shirt dirty, and while you are still in your right mind, walk around to the front wheel and kick the small gear on the speedometer cable out of mesh with large gear; then try the car for the same noise.

If the trouble is cured, have the large gear on front wheel adjusted, as often a stick or stone will fly from the opposite wheel and pass between the meshing gears, throwing them out of line. Do not set the small gear in mesh too far with the large one, as a little mud will make them noisy in this position.

The driving cable to the speedometer should be disconnected and removed from the drive-shaft housing or tube, and thoroughly cleaned and greased at least once every two months. Also pack and tighten down grease cup at the swivel joint often, as these gears rotate fast and have none too large a bearing surface.



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THE buying of the right engine for the farm is a family affair. Your wife, the boys, the girls, the help—everybody about the place will be helped so much by the engine that it pays to buy carefully. Get a good engine, a Mogul or Titan, give it all the jobs it will do and handle it properly, and it will still be shouldering the drudgery years from now.

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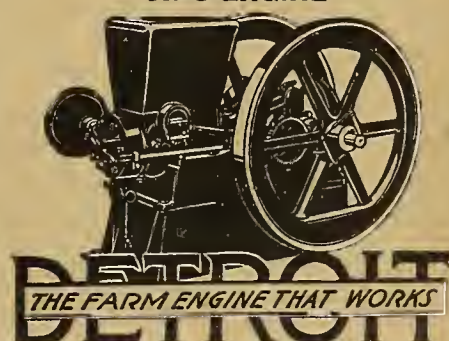
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Good-Health Talks

A New Department for Our Readers

By DAVID E. SPAHR, M. D.



Colds

AN ACUTE inflammation of the upper air passages is called a cold. There are many varieties of colds, and in times past they have been described under many different names. If located in the head and nose, accompanied by sneezing, watery eyes, and a running nose, it is called an acute coriza. If it extends downward to the pharynx (throat) or larynx (the upper part of the windpipe) or the bronchial tubes, you want to add the little word "itis," which means inflammation, and you have the medical names of these diseases. Thus: pharyngitis, laryngitis, and bronchitis. Then we have the epidemic colds, such as have been called catarrhal fever, influenza, epizootic, and the latest, la grippe, which are really exaggerated, overgrown colds.

Colds prevail more extensively during the changeable weather of early spring and fall. Thus we have the acute colds of spring and the autumnal colds of September and October.

Symptoms: The patient feels chilly, with headache, and sneezes frequently. Often there are pains in the back and legs. There is usually a slight fever. The pulse is quick and the skin is dry. The mucous membrane of the nose is swollen (stuffed up) and the patient has to breathe through the mouth. There is a thin, clear, irritating discharge that makes the edges of the nostrils sore. The eyes weep, and the sense of taste and smell are lost. There is soreness and stiffness of the neck, and the act of swallowing is painful. The nasal discharge becomes turbid and more profuse. With this exception, the symptoms seem to abate, and within four or five days the patient is on the road to recovery. Without proper treatment the case may be allowed to become chronic, especially if there are a number of fresh attacks. The case may degenerate into chronic catarrh, true croup, bronchitis, pneumonia, with a possibility of tuberculosis.

Treatment of Colds

The treatment should be general and local. Active cathartics should be taken until not only the bowels are thoroughly unloaded and all waste carried off, but until all the secretory organs are actively at work. Prohibit all alcohol and tobacco, and partake of a spare and light diet.

Plenty of fresh air and from 5 to 15 grains of bromide of soda every two or three hours will give much relief. Enlarged tonsils or adenoids will always add to the severity and complicate the case, and will need appropriate treatment.

Earache

A mother of several children asks what she can do for earache, from which her children suffer so severely.

Answer: External earache is caused by washing in cold water, picking the ear with the finger nail or hairpins, while disease of the middle ear is caused by extension of catarrh of the nose, enlarged tonsils, and adenoids.

Be extremely careful what you put into your child's ear. A fond mother, goaded into desperation by the screams of her child, will often resort to desperate means to soothe the pain. A hot-water bottle applied to the ear is a great help. Don't use laudanum or other anodynes. The best remedy that I have ever found, and at the same time is safe and comparatively harmless is: Oil of capsaic, 1 dram; oil of sweet almonds, 1 dram.

Mix, and drop from two to four drops in the ear as often as required.

If there is a discharge of pus from the ear, wash it out gently with equal parts of peroxide of hydrogen and warm water.

Where there is disease of the middle ear, diseased tonsils and adenoids should be removed and the nasal catarrh cured.

Poisoning by Mistake

Too many people are being poisoned by taking the wrong medicine by mistake. There is absolutely too much carelessness in the handling of strong medicines. Probably not any more so in the country than in the city, but the consequences are more disastrous in the country because of the distance to the hospital or medical attendance. We read

in the papers of a man who took tablets of bichloride of mercury, mistaking them for headache tablets. I had a patient who took carbolic acid for cough medicine. Both lives were finally saved after much persistent work, but the results were serious and the scare was horrible. Life is too valuable to fritter away carelessly. Too much care cannot be exercised about poisonous drugs. It has been suggested that all bottles containing strong medicines should be of some peculiar shape or color. It is said that in England bottles whose stoppers have sharp points are required to be used.

Self-preservation of our own lives or the lives of our dear ones, ought to prompt us to be careful without invoking the strong arm of the law.

Sprained Wrists

"I sprained my wrist some two weeks ago, and it is still badly swollen, painful, and tender. What can I do for it?" asks a young man from Indiana.

Answer: First be absolutely sure that it is sprained, and not a fracture or dislocation. I would not be surprised if under an X-ray your wrist would show a displacement of one of the small bones or a break. Possibly this will teach you not to neglect these accidents. A surgeon could have reduced the displacement or adjusted the fracture, or properly strapped with adhesive plaster the sprain, and your arm would have been strong enough to work with by this time.

Are Colds Contagious?

This question comes to me from a subscriber, and it is a very proper one.

Answer: I ran across a bit of poetry the other day that expresses my sentiments in this regard very truthfully. It was entitled "Mary's Little Cold," and is quite appropriate at this time:

"Mary had a little cold
That started in her head,
And everywhere that Mary went
That cold was sure to spread.

"It followed her to school one day
(There wasn't any rule);
It made the children cough and sneeze
To have that cold in school.

"The teacher tried to drive it out;
She tried hard, but—kerchoo!
It didn't do a bit of good,
For the teacher caught it too."

Colds may be excited alike by exposure to drafts; by various inhaled substances which may act either chemically or mechanically; by certain ingested substances that are eliminated through the nasal passages; and finally, by specific bacterial poisons in the course of general infectious processes, such as influenza, measles, etc. Until I receive further enlightenment upon this point I shall cling to the theory that most of the colds are produced by a germ or micro-organism, and are consequently contagious.

Sore Eyes

"Do measles cause sore and weak eyes, and why?"—Mrs. A. O. T., Indiana.

Answer: The catarrhal condition, so prominent in measles, as shown by the weeping, congested condition of the eyes, if not properly protected or treated, is liable to become chronic soreness of the eyes.

Adenoids

"What are adenoids, and do adults suffer from them also?"—O. M. K., Wisconsin.

Answer: Adenoids are a vegetative growth in the back part of the nasal cavities that obstructs the breathing. The character of the voice is changed and mouth-breathing is the rule. Their presence is often the direct cause of ear troubles, bed-wetting, and mental dullness.

Adults occasionally suffer from adenoids. The only cure is removal.

Burns

"What can I do for a severe burn?"—Mrs. C. M., Kansas.

Answer: Usually a good household remedy, always at hand, is to apply cloths dipped in a saturated solution of bicarbonate of soda (baking soda); or the whites of eggs and sweet oil. A physician would apply a ten-per-cent solution of carbolic acid and glycerine or an ointment of Unguentine. This would relieve the severe pain at once, limit the extent of the inflammation, prevent infection, and promote healing. We shall have more to say on this subject later.

Victory on Windmill Row

Rising Waters Cause a Turn of the Tide in Estelle's Home

By MABEL S. MERRILL

THE two sisters stood still to look across the three-acre field of corn which stretched from the river on one side to the woods on the other.

"It's the best piece in town," announced Marion proudly. "And just think, Hugh has done all the work on it ever since it was put into the ground."

"Here he comes now," said Estelle, the elder girl, gazing critically at a long-legged boy of seventeen who was hurrying toward them across the field. "He looks as worried as if he had taken a contract to sail the ship of state."

Estelle's tone was ironical, but Marion ran to meet her brother.

"I can't hire a man to pick corn for love nor money," explained Hugh in answer to her question. "The corn shop starts in the morning, and all of the men that haven't got corn of their own to pick are going to work for the packers. It's just possible I can get Captain Wheeler for a day, but he wasn't sure he'd come."

The three acres of corn had been planted to sell to the canning factory—the "corn shop" as Hugh termed it—and the crop was now just right to be gathered and delivered. If allowed to stand even a few days longer it would be too hard and dry for canning.

"Then we must go right to work and pick what we can ourselves," declared Marion. "Every ear we pick is so much saved. We can load it into the carts as we work, and cover it up for the night with big pieces of canvas in case it should turn cold or wet. I'll go this minute and get Clifford to help harness the horses and bring up the baskets and everything we want."

Estelle opened her mouth to speak, but Marion was already running lightly down the long field toward the house.

The elder girl turned sharply upon her brother:

"It can't be you expect Marion to help with it?"

"I did the best I could to find a man," Hugh returned shortly. "I never asked Marion to help, but you can't keep her out of the field when she sees anything going to waste for want of a hand."

"Of course," snapped Estelle, "with Father sick and nobody to manage properly everything is in a mess."

"The saving of the corn crop means the saving of two or three hundred dollars to Dad," Hugh explained savagely, "and Marion knows how much he needs it."

Estelle turned her back impatiently and looked with a frown at the procession coming up from the barn. Marion was driving the pair of big farm horses harnessed to the largest cart. Behind her came Clifford, their fourteen-year-old brother, standing jauntily upright in a smaller cart and urging old Maggie, the slow-stepping mare, by flourishing his flapping straw hat above her lean back. The elder sister bit her lip as she looked on, then she caught up an empty basket and fell to work.

"I suppose I must make up my mind to stay here and drudge with the rest of them," she thought drearily. "It does seem as if Father might have spared the money for my senior year when I've worked all summer at private teaching to help out."

THEY worked until darkness crept upon them and rain began to fall. Heavily and steadily it fell all night, and when the corn pickers awoke in the morning they were not surprised to find that the river had overflowed its banks.

"I don't see how you girls can go corn-picking any more," observed Mrs. DeLand, the mother of the family. "Clifford says the water's rising every minute and the boat has gone off."

Hugh's face grew gloomy. The help of the girls would be badly needed to-day, though he hadn't counted much on Estelle after her grudging assistance of last night.

But Estelle had been in her Father's sick-room, and something in the sight of the worn and aging face had changed the color of her thoughts.

"We can ride up to the corn piece in the carts," she said promptly. "The water isn't too deep yet. And we'll take a roll of bedding and the oil stove, and a great basket of things to eat. The carts are sure to be high and dry to sleep in if we have to camp in the field, and not a thing can happen to us up there."

"Captain Wheeler sent word early this morning that he would come and help all day," Hugh said as they hurried

out and clambered into the wagons. "That will make three of you to pick. Cliff and I can haul the loads by the pasture road as fast as you can fill the carts."

They worked steadily all day, the carts being filled, and then emptied at the mill again and again. The day's work was giving Estelle a new understanding of what the "home team," as Hugh called it, had had to face during the three years she had been away at

started Marion discovered that they had no matches to light the little oil stove, and proposed to go across to Captain Wheeler's by the pasture road and borrow some. The water had invaded the pasture at last, and was running in a stream across the lowest dip of the road, but she scrambled over safely by means of a fallen tree.

"All right, Estelle," she called back. "It's deeper than I thought, though, and perhaps I'd better stop at the Captain's and ride back with the boys."

LEFT alone the elder girl sat down and waited at the edge of the water across which her sister had disappeared. She remembered with anxiety that Captain Wheeler had said in the morning that a piece of the old toll bridge had lodged between the islands down river, and that if a mass of debris should get jammed against it the barrier might become a dam which would send the water flooding suddenly back upon them.



Hugh-rowed hard, while Estelle pushed away the obstacles

college. She felt increasing respect for the pluck and patience that had gone into the work of the farm.

"It's Father's sixtieth birthday," she thought once, stopping to straighten her tired back. "Poor Father, I never realized before what it meant—all this work that keeps coming and coming and piling itself up the year round. He's got food and clothes and comfort for us out of these old fields. He got my three years at college out of them—by work like this. It begins to seem a miracle to me that he could, and yet here I am sulking all the time because I can't go back and finish. The last payment on the mortgage comes due this week, and I suppose he hasn't any money."

Estelle was the first to finish her luncheon at noon, and then she slipped away and ran down to the brink of the rippling sheet of water that divided her from home. It was much deeper than in the morning, and the surface of it was red and yellow with apples and pumpkins from low-lying harvest fields above. But the girl was so intent on her mission that the significance of these changes escaped her.

She fluttered her handkerchief till the white signal brought her mother from the house, and then she put her hands to her mouth and sent her strong young voice across the flood:

"Mother, we all forgot it's Father's birthday. Won't you go up in my room and get a fat blue envelope out of my handkerchief box and give it to him with Estelle's love and many happy returns?"

Then she went back to her work. The blue envelope contained the whole of her summer savings from her teaching.

At dusk Hugh and Clifford went off with the last two loads of corn for that day. Some time after the carts had

She rose to her feet and peered anxiously down into the field where the black waves were catching the fire of the stars.

"Oh, here they come; I'm so glad!" she cried at last as the heads of Hugh's horses came out of the darkness at the other side of the stream. Clifford and Marion were in the smaller cart which drove close behind into the water.

Suddenly Estelle sprang to her feet. "Hurry, hurry!" she called in sharp tones of alarm. "Something's happened down below. The water's just rushing back from the field."

The thing the Captain had predicted had come to pass. The flood, pent up below, was backing up the course of the small stream across the pasture road. The water was up to the bodies of the carts before dry ground could be reached. Hugh's horses struggled safely to the ridge where Estelle was, but old Maggie, floundering after them, was off her feet. Hugh left his own team and, dashing into the water, got her by the head and helped her out before he saw that the cart body with Clifford and Marion clinging to it was swirling away on the flood that seemed to be running in all directions at once.

"They'll be drowned or smashed if they get out into the field," he muttered, staring into the dark.

"Come quick! I saw an old boat over in the choke cherry bushes. Wake up, Hugh, and do something," cried Estelle sharply, for the suddenness of the emergency seemed to have left the boy dazed.

It was Estelle who made sure that the old boat—a bit of the flood's debris—would hold them, who found the oars and got Hugh into his seat, and it was at her word that they pushed across what had been the brook, and slid out upon the black wreck-strewn water be-

side the river whose bank was blotted out.

A small building of some kind was careening along in midstream; boxes, barrels, heavy logs, and sticks of heavy timber made the flooded field a perilous place for the old boat. But Hugh had recovered himself now and rowed steadily, while Estelle, with a stout pole she had found, pushed away threatening obstacles. They soon found the cast-aways clinging to the cart body which had jammed itself against a tree. They were unhurt, and presently all four were in the boat fighting their way toward the nearest land, which happened to be the foot of the cornfield. A little later they were laughing at their mishap as they sat drinking hot coffee around a comfortable bonfire at the edge of the woods. Only Hugh was silent. Maybe college didn't spoil a girl, after all!

The makeshift dam between the islands broke that night, the water fell rapidly, and by noon of the next day they were able to walk home to dinner and recount their adventure to the anxious mother and father. They walked back again in the afternoon, however, for the corn job must be finished.

ESTELLE was very tired and depressed, and the feeling kept growing upon her that it was her duty to stay here and share the drudgery of the old farm.

"Estelle," Marion, basket in hand, broke in upon her solitary musing, "mark your row with something pink and fluttery, so you'll know where you stopped, and then let's go up and find Mother. She's at the top of the windmill row, picking corn, and it's too hard work after all she's done at home."

They went crosswise through the rustling corn forest to investigate the doing at the top of the windmill row. Evidently the picker had gone out to empty her basket, for no one was visible. As Estelle caught sight of a crimson scarf, spangled with silver, which was knotted about the pole of the windmill, she fell back against her sister.

"Pinch me, Marion! I know I'm dreaming a fairy tale. That's the dean's scarf. I'd recognize it in China. It's the only thing we girls have ever laughed at her for—it's so giddy compared with the rest of her belongings."

Marion looked incredulous. But just then she heard her mother's voice calling her, and without stopping to speculate about the scarf she ran swiftly down the row, leaving her sister to follow or not, as she pleased. Estelle made her way out of the corn, which was tall enough to hide everything beyond it. At the edge of the piece she found herself in the grasp of two hands that briskly turned her face to face with her room-mate at college, Virginia Raynor.

"Here she is now!" shouted Virginia to the dean, who was emptying her basket.

"Where on earth did you drop from?" cried Estelle.

"You needn't be so amazed at my looking you up," laughed the dean, straightening herself and smoothing her hair. "Did you think you were going to slip through my fingers? I know all about your father's sickness and the other difficulties. I've been getting acquainted with your mother over the corn-picking. I came over from home to talk to her and I found her here, and we've settled a good many things."

"You've got the Remsen scholarship," broke in Virginia, flourishing her basket excitedly. "It isn't a large one, but it'll help. And you and I are going to set up a Saturday mending shop in our room and earn our board and keep."

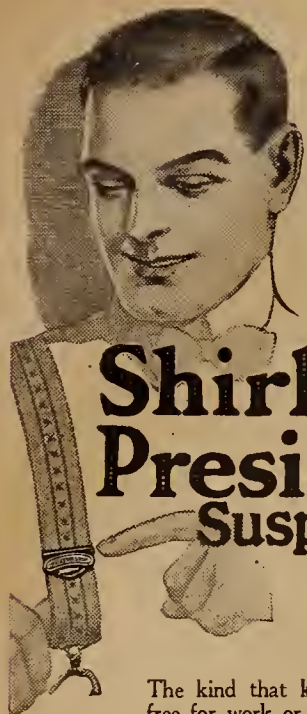
"Haven't we done well with the corn, too?" demanded the dean, pointing to the overflow from the carts. "You are lucky girls to have grown up in a place like this."

Estelle could not control her emotions. She turned away to hide her face, but the sound of her sobs made everyone else feel happily tearful. Hugh reappeared just then, and after the dean had explained the situation to him, he went to Estelle and put his hand on her shoulder:

"I guess a college education is all right for a girl after all," he said. "Maybe it's that kept you cool when I didn't know enough to get a boat. I'm mighty glad you can go back."

"Windmill Row seems to have taught us all a good many things," said the dean quietly, as they picked up their baskets and started home.

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The Rise of George Simmons

By CHARLES H. LERRIGO, M. D.

Chapter III—George Climbs One Rung Higher

NEXT morning the office of the state bacteriologist called me up again. It was absurd to suppose for one instant that the test of Alice's blood which I had sent in the other day would show evidences of positive infection, but just the same I listened with excitement. The report was again positive!

There could be but one explanation: this sweet, young, innocent maid must be a typhoid carrier!

I sat in my chair with a silly laugh

Just ahead of us was a very interesting couple... "Alice and George! Well—what—do you know—about—that?"



and then a heavy frown. Typhoid Alice! I recalled again the original case of the famous Typhoid Mary, the Irish cook, of New York, who was traced through seven different families and found to have infected twenty-six different individuals without herself being conscious of illness. Now we had a Typhoid Alice! I studied long over the situation. There was clearly but one thing to do. I must give her treatment until she was clear of infection. I knew well what a sweet time they had trying to perform this little job for Typhoid Mary. They kept her under observation for a year and a half, and then they weren't dead sure about it.

But I thought I knew better. I had my ideas of treatment, and I was not wholly sorry to put them to the test. However, I could not treat her without explaining, and I disliked exceedingly to tell her. Thank fortune, there was no special necessity to tell John Gandy, for it meant, in all probability, that, instead of the Simmons introducing typhoid, John Gandy's own cousin had carried it to them. What a blow for opinionated old John!

But what a terrible story to have to bring to an innocent young girl, scarcely out of her teens. A typhoid carrier—a disseminator of a terrible disease. What a scene I must expect! What weeping and distress, possibly fainting!

She had engaged to come for a report that morning, and when I opened my waiting-room door she was there.

She stood at the window, a bright and radiant vision. How could I cloud her happiness? What a pall of gloom I must cast over her sunshine!

I went at it with brutal abruptness.

She did not cry. She did not act bewildered. She neither moaned about the disgrace nor wrung her hands in distress.

She sat straight up in her chair with her hands clenched and a curious, tense look in her eyes. And all that she said was:

"Very well, Mr. John Gandy! Very well!"

It was undoubtedly hard to make it clear to John Gandy that she must come to town and take treatment for some mysterious ailment the nature of which was not told him. But Alice arranged it all right, and was duly unloaded, with a small trunk, at my door.

Even calamity generally has a good side for someone, and this time it was for me. I was to have the opportunity of showing how a typhoid carrier could be cured in a reasonable length of time.

I had stood back for many years while the hospital men and the city men took all the glory; but they had had no easy time clearing up typhoid carriers, and now I was to have a chance to show how it really could be done.

Never mind what my theories were. They were my own, and I had just as much right to evolve them as a doctor in a laboratory.

Alice came to my office every day, and I looked her over and gave what I thought was necessary.

I was gazing through my windows on one of these occasions, thinking over some symptoms which I had discovered only by the most painstaking questions, when across the street I saw George Simmons sneak into the drug store. Alice crossed the street about the same time, and just as she fronted the drug store who should step out but Mr. George Simmons, as surprised to see her as if he had not been expecting it. I wasn't going to stand for any of that foolishness and ran down-stairs myself. Alice had just passed on, but George still stood smiling fatuously after her re-

treating figure.

"What are you doing in town, George?" I broke into his pleasant reverie.

He came to himself with a jump.

"I'm working," said he. "I've gone back to my trade while I earn a little cash. Getting thirty-five cents an

hour at the mill."

"What's the farm doing?"

"It's doing all right. Ella's boss, and Jim and Ben and Danuy are doing most of the work. I go out at night whenever I can. I'm fixing up a scheme."

"What's your scheme?"

"I'm after the prize for the best improved front yard. Professor Hornsby, dean of the Agricultural College, is offering the prize. He thinks farmers should take as much pride in their lawns as city people. So in connection with the Grange Fair he offers a prize of twenty-five dollars for the most attractive front lawn, and I'm after it."

"I don't see how on earth you can hope to get in on such short notice, though."

"That's because you're thinking of the weeds and brush. You're not thinking of the old shade trees we've got, nor the slope of blue grass. You come out with me some evening and give me your honest opinion. I should like to have your help."

Things didn't shape just right, and it was several weeks before I was able to run out with George to see his yard. But at last came an evening when I could spare the time.

I was amazed at the transformation wrought in the Simmons place. It was as George had said, clearance of weeds and brush had made it a different place. It was an old farm, and originally well laid out. There were two big lilac bushes, a dozen fine trees scattering through the ground, some rosebushes, now trimmed and trained up. A good deal of the grass was crab grass, but it looked well after the leveling influence of the lawnmower had been applied.

Another notable improvement was a kitchen sink. George had intended making one and lining it with zinc, but found that a good one could be bought in Topeka for \$2.75, so he had contented himself with making a stand for it, with an extension for draining dishes. He had run the drain pipe out below the sill and carried it over a hundred feet, to trickle into a sandy bed which was off away from his well.

"It's the greatest thing of all," declared Ella with fervor.

A mason in need of carpenter time had traded George some of his time, so they had the well all fixed according to my suggestions.

I went toward my car as the dark gathered, with the deep conviction that someone was going to get a shock. The despised Simmons family was likely to win that Hornsby prize.

When I came close to the automobile I received a very good imitation of a shock myself. It was almost dark, but even in the twilight I could see that my rear tires were both flat. They had been all right when I left the car. I could only conclude that the Simmons boys had done it.

"You may rub, you may polish the skin as you will, But beneath it the black man is ebony still."

Ella was dismayed. George, whose intuition is good, was furious. I felt very carefully over the tires. There was no gash, no large cut. The little rascals had, no doubt, made a simple puncture and a safe escape.

Inner tubes were in my car, but what an inviting prospect! Changing them in broad daylight is bad enough.

I reluctantly accepted Ella's invitation to stay all night.

George came into my room while I was undressing.

"It was Danuy," he said savagely. "He just couldn't stand the temptation to see what'd happen. He did it with a hatpin."

"I expect you'll have to accommodate me with a nightgown, George," I suggested. "Making a visit in this unexpected fashion I am, of course, unprepared."

I thought George looked a little surprised, but he left the room and after a while came back with a garment which was undoubtedly a nightgown. It was the kind that stares out from the white-goods windows embarrassing a modest mau as he unobtrusively seeks to attend to his business affairs. It has all manner of tucks and trims, and even had a blue ribbon ruffled snugly in the neck.

"It's Ella's," George explained with superfluous detail. "I hope it's big enough."

"I'm afraid it is not, George," I said with severe dignity. "I expect I'd better sleep in my underwear for once."

"That's the way I always do," said George in a tone of superiority which rasped me a little.

"And there you do a very insanitary and unhygienic thing, George," I reproved him. "Sleep in your natural skin with no protection but the bedding, if you wish. That is advocated by some as the very best sleeping method. But when you turn into bed wearing the same undergarments you have worn all day long you are insulting your skin and giving it no chance to get fresh and rested."

"I really didn't know men ever wore nightgowns," George stated, "but if it's the proper thing for a gentleman to do, I'm for it."

There were several matters of personal hygiene that my stay overnight with George brought out. A toothbrush was an unknown thing in the Simmons household, I ascertained. I said nothing at the time, but later on I led George in to a dentist's and bade him deposit a dollar and get his teeth cleaned. Then I explained:

"Clean teeth are absolutely necessary to permanent good health. Clean teeth are absolutely necessary to sweet breath. Clean teeth are absolutely necessary—" this time I looked hard at him—"to a gentleman. A little expenditure twice a year with a dentist and a toothbrush renewed as occasion requires are necessities, absolute necessities."

When I went out to the car I found my tires as good as ever. George had got up very early and fetched a neighboring expert to do the work while I slept.

It was just like the boy. He was continually showing up good traits, and one of his strong points seemed to be to make good what the others of the family sent bad.

At the breakfast table he was telling me of his efforts to square their debts, and handed me a receipt for seventy-five dollars which he had found.

"I found this last week," he explained. "It is dated back last fall, about the time Father sold his hogs. They ought to have brought one hundred and forty dollars, but all the money he brought, back was twenty-five dollars. This is a receipt for seventy-five, but it doesn't say what he got for it or how much more he has to pay. Poor old Dad was always uncertain about his money matters."

"It is signed E. Z. Smith, and is on Smith Brothers' stationery. It may be for almost anything," I remarked. "They are a North Side firm who do a little of everything in a small way: farm lands, city property, Florida swamp, life insurance, lightning rods—hard to say what. I know 'Easy,' and if you will give me the receipt I'll look it up."

My chance came earlier than I had anticipated, for I saw the gentleman holding up a pillar of the Shawnee Bank as I drove home that morning.

I pulled the receipt out of my pocket. "Hello, Smith!" I shouted. "Come over here."

"You remember giving old man Simmons this receipt?"

"Who in time's old mau Simmons?" he asked.

"Look at the receipt and see if you can't remember," I suggested.

"Oh, yes, I remember. He came in about some Florida lands. We were just about to close him up when in came old man Dix just a-raisin' Cain because he's found a little water on some land we'd sold him. That queered everything. But I hated to see the old man leave the office with all that good money to blow in at some joint, so I tried him on everything we had. Finally I told him that I could give him a five-thousand-dollar estate for seventy-five dollars. He might a' been a bit muddled an' thought he was goin' to get the coin, but what I really sold him was a ten-year term insurance for five thousand."

"You sold old man Simmons five thousand dollars insurance?"

"That's what I done. Took him over to Doc's and had him examined and fixed up all in a half hour to clinch the matter."

"Well, I suppose you know what became of the old man?"

"No, I never seen nor heard nothing from him since. I got his policy in the office yet waitin' fer him to call for it."

"He never will. Your company owes his heirs five thousand dollars. It was a good deal after all. The best one the old mau ever turned."

I walked over with the flustered Smith to his office, listening to an excited flow of remarks divided between the luck folks did have, the hope that I would assure the family that he, E. Z. Smith, was their benefactor, and the wonder if they would not like to invest in some fine Florida lauds.

He gave me the five-thousand-dollar policy all made out in due form, and I also secured the necessary papers for a death claim.

Old man Simmons had really done something big for his family.

And this was how the Simmons family came to decide to move to town for the children's schooling, and leave the farm to George.

But they didn't do it at once.

For one thing they had to stay on the farm until the Grange Fair was over. Not one of the family would have missed that fair. The Gandys were likewise counting a good deal on it.

John Gandy was one of the fair supervisors. He had a good deal of business in town in connection with it. One afternoon he called at my office.

"What about Alice, Doctor?" he asked. "Is she going to be home for the fair?"

"John Gandy, you people don't give my treatment a fair show. That girl has to have a complete rest in bed for full recovery, and I'm determined she shall have it, no matter what the Missus or any of you say."

"Very well, Doctor. I don't wish to interfere with your treatment. I'm in town on some business for the fair. Mr. Frank, the preacher, has been in to see me a number of times lately and he has some mighty good ideas. He says one of the weakest points about most country fairs lies in the lack of arrangements for toilet and other conveniences."

"I think he is quite right."

"So do I, now that it's brought to my notice. I came in to-day to see what we could do about latrines for our fair. Tell me what you know."

What I knew was that public comfort stations at fairs are always inadequate. I have a good bet that much of the added typhoid which breaks out in the country in October and November has its main distributing station at the fair in September.

I talked long and earnestly with John on the subject, and he promised to make our Grange Fair a model. It was dark when we finally left the office, and we walked through the quiet streets to my home.

Just ahead of us was a very interesting couple. They walked arm in arm. Their movements were not improper, but their intense interest was complete. The lady seemed a trifle coy, but this was amply compensated for by the earnestness of the mau.

John looked at me and smiled. I looked at John and chuckled. Just then they came to a crossing and stepped out into the full glare of the arc light.

John's face was more expressive than his speech. Usually slang-free and as correct as becometh one who is already township trustee and may go higher, in this case he could only ejaculate feebly, slowly, and with profound pauses between the words:

"Alice and George! Well—what—do you know—about—that?"

[TO BE CONTINUED]

A Great Michigan Woman

By Jessie Field

"WE ARE looking on organizations to-day not for what they will do for their members but for what they will do for community good. We measure them by what they are doing to build up community spirit and institutions. So this forenoon we do not care to hear about the organization you represent, as such, but we want a vision of what your organization means in the community."

A quiet little woman, with hair beginning to grow gray and blue eyes which made you believe in the mind and heart behind them, uttered this challenge from the platform of the Rural Progress Conference at the Western Normal of Michigan.

"Who is she?" I asked.

"Miss Jennie Buell," my friend replied, "state grange secretary of Michigan."

So this was Miss Jennie Buell, that true-blue leader of country forces who counts her friends by the hundreds on the farms of her State! She and I had corresponded for several years because we had found out that we have the same kind of love for the country and for country people, and now that I saw her and heard her speak my admiration and affection grew even stronger than they had been before.



She teaches the whole State of Michigan

It was an open meeting with no set program. People talked freely of their neighbors and achievements, and Miss Buell drew them out and found the very kernel of their message as only a woman of large experience and profound sympathies could do.

She was born on a farm in Cass County, Michigan, but in her young girlhood her parents sold that farm and moved on to another near Ann Arbor, for the sake of educating their children in the state university. Miss Buell, however, being the oldest of the family, took up the responsibility of putting the younger members through college instead of going herself.

"No, she didn't get to college," one of the farmers at this meeting remarked to me. "Her sister did, and she's a teacher now at the state normal. But Miss Jennie, she has the whole State to teach."

And so she has. That is, practically, what it means to be a state grange secretary. She has been so good a teacher that Michigan has one of the most successful granges and the largest grange membership of any State.

She and her sister still live on the farm near Ann Arbor, and are foster-mothers to a family of nephews. Her life has thus the definiteness of concrete farm experiences and the breadth of tender human interests. Out of its completeness she goes out to lead her friends, the farm people of Michigan.

DRUDGERY, according to a domestic-science expert, is work lacking interest either because it has no purpose or is unskillfully done. As soon as there is skill and purpose in work it ceases to be drudgery.

Don't turn up your nose at fish offered in the markets solidly frozen. If handled properly they are perfectly good for food, and full of the flavor of fresh fish. They are frozen alive, and can't deteriorate until they thaw.

Cooks Small Carrots

DO FARM AND FIRESIDE housewives know how delicious young carrots are when even as small as one inch in diameter? Sylvia A. Runner recommends them to all unacquainted with this dish. She makes use of the little carrots, either sliced or mashed. They are cooked and seasoned like peas.

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Turns night into day. Gives better light than gas, electricity or 13 ordinary lamps at one-tenth the cost. For Homes, Stores, Halls, Churches. A child can carry it. Makes its light from common gasoline. No wick. No chimney. Absolutely SAFE.

COSTS 1 CENT A NIGHT

We want one person in each locality to whom we can refer new customers. Take advantage of our SPECIAL FREE TRIAL OFFER. Write today. AGENTS WANTED.

SUNSHINE SAFETY LAMP CO.
648 Factory Bldg., Kansas City, Mo.

DON'T Pay Two PRICES

HOOSIER Stoves Ranges FREE

To try in your own home for 30 days. Show your friends. Freight paid by us. Send it back at our expense if you do not want to keep it. You can get the best at actual factory prices. Are heavily made of the highest grade selected material, beautiful ornamentation and finish, with improvements that absolutely surpass anything ever produced. The Best in the World. Guaranteed for Years by a Two Million Dollar Bond. You can save enough on a single Hoosier Stove to buy your winter's fuel. All HOOSIER STOVES Guaranteed for years. Send Postal today for Large Free Catalog "and prices." Large assortment to select from. No obligations.

HOOSIER STOVE CO.,
126 State St., Marion, Ind.

YOU CAN SELL THIS LINE

Just as easily and earn as much money as our hundreds of other agents who clean up—\$1.50, \$3.00 a day with our "ZANOL" NON-ALCOHOLIC FLAVORS in tubes, Soaps, Perfumes, Toilet Preparations, etc. Over 100 kinds. Fast sellers, steady repeaters. Every home a customer. Little or no capital required. 100 percent profit. Light, neat sample case furnished. Write Today for full particulars—FREE

American Products Co.
4008 Third St., Cincinnati, O.

In Wet, Cold and Sloppy Weather, Look for the Red Ball

"Ball-Band" Rubber Footwear with the Red Ball Trade Mark will give you longer wear at the lowest price per days wear.

"BALL BAND"

"Ball-Band" boots are vacuum cured. During the vulcanizing this process causes a tremendous pressure on the fabric and rubber and makes the boot one solid piece.

Every spot on "Ball-Band" Rubber Footwear that gets a bit of extra wear or strain is made extra strong.

Over 50,000 dealers sell "Ball-Band."

Look for the Red Ball in the store window and on the goods. Arctics for men, women and children. Write for Free Illustrated Booklet—

"More Days Wear"

It tells how to get more service out of rubber footwear.

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305 Water Street Mishawaka, Ind.
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Gold Dust makes
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That they gleam
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GOLD DUST,
the active
cleaner, is inex-
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Its activity be-
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It cleans everything from
kitchen utensils to the finest
woodwork, without scratching
or marring.

Follow the simple directions on
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HAIR BALSAM**
A toilet preparation of merit.
Helps to eradicate dandruff.
For Restoring Color and
Beauty to Gray or Faded Hair.
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We give this Talking Machine and Record for
selling only 35 packages of Post Cards at 10 cents
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or other make flat disc record. Order Post Cards today.
WE TRUST YOU. When sold send us the money and we
will send you the Talking Machine by parcel post prepaid.
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\$546

per day of seven hours is the average profit made by
3,169 men.

Experience unnecessary. References required. Send postal
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The Aluminum Cooking Utensil Co., Dept. B, New Kensington, Pa.

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absolutely FREE engraved with 3 initials. Your friends
give or exchange others. What more beautiful token or
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**A Kalamazoo
Direct to You**



Our Boys and Girls

Making an Ice-Cycle

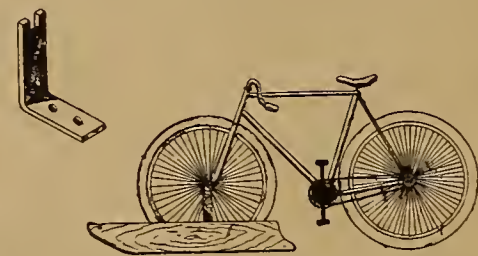
By A. E. Swoyer

PERHAPS you have often wished that you might ride your wheel along the snowy winter roads, or that you might use it to skim swiftly over the frozen surface of the lake, whose mirror-like smoothness promised almost unlimited speed. If you tried the latter, however, you discovered that the front wheel slipped and skidded so that steering was almost impossible and hard falls correspondingly frequent, or that the driving wheel failed to get sufficient grip upon the ice to enable you either to start quickly or to stop without sliding. Should you care to do a few minutes' work in making the bicycle sled illustrated, you will find in it a solution of these difficulties.

The first step is to cut a slit in the top board of an old hand sled, wide enough so that the front wheel of the bicycle will slip through and long enough so that when the wheel is in place the front tire will clear the ice by about one inch. This slit will not interfere with the use of the sled for other purposes. Slip the front wheel into this slit and measure the distance from the top of the board to the top of the axle. This will give you the proper height for the braces shown in the sketch, and of which you will need two. These should be made out of heavy strap iron, notched at the top to receive the ends of the axle and drilled through the base portion so that they may be fastened to the sled. Bolt them in place, unscrew the nuts on the ends of the front axle, slip these ends into the notches, and replace the nuts, being sure that they are tight, and your ice-cycle is ready for use.

While the above arrangement will work well on hard-packed roads, it will not give complete satisfaction on ice because the driver cannot secure a grip upon the glassy surface—you can neither go as fast as you like nor stop when you want to. A sled which will allow you to make great speed may be made by removing the tires of the bicycle; then, on the rear wheel only, set screws into the rim at close intervals and cut their heads off with a hacksaw—these will give a firm grip upon the smoothest surface, and will insure you a much greater control over the bicycle. When about to make a sharp turn when traveling at high speed with this device, it is well to slow up a little; otherwise the screws may be wrenched from the rim, or the entire rear wheel may be given a bad twist. To stop, either back-pedal or use the coaster brake as in ordinary riding.

Should you not desire to mar the rim with screws, a fair substitute for them may be made by knotting a heavy rope at intervals and binding it about the rear wheel as if it were a tire. This will work better than the rubber tube on or-



inary roads, and almost as well on ice as will the screws, but it will need occasional renewing.

Whichever method you follow, the making of a cycle sled involves but a very slight expense, while the few minutes required to set it up will be repaid to you many times over in the pleasure afforded by its use. It is an experiment well worth trying, particularly as no damage results to either bicycle or sled.

The Men Who Win

By E. L. Vincent

AWAY down in southern Illinois I had a little talk, at a hotel where I was stopping one night, with the engineer of one of the fast trains which every day passed through the place. That was the end of his run and he was resting before the return trip.

"Some folks think it is an easy life to be an engineer. They wish they had such a place. They do not know what they are talking about. When I get down out of my cab I can scarcely stand sometimes," so he said. "I am every minute on my nerve. I must watch everything and everywhere. If I lose time on account of a storm or a wet rail, I get a message from headquarters. I tell you it is a terrible strain!"

That is why the runs on all great lines are so short. Over and over again the crews of the fast trains are changed be-

tween New York and Chicago, or over any other important route of the country. Many break down under the strain and drop out.

Ask the head of any great manufacturing establishment what becomes of the vast army of young men who apply for positions, and he will tell you that they do not stay long: they soon drop out. It is too much like work. They are looking for a place where the pay is good and where there is little to do.

Sometimes we are told that comparatively few who start out to live the white life hold on to the end. In a little while they drop out. The stress and the strain are too severe and they fall back into the old ways and go out of sight.

But think of the men who hold on! When any great demand is made, it is the veteran engineer who is called. His name stands highest on the list. His pay is greatest. The day will come when he will retire with honors.



TO-DAY we think of the West only as having its pioneers' homes. This is because most of the early homes in the so-called Eastern States have been replaced by more modern structures. This picture represents the home of an early settler in Colorado. In the foreground is a fence built with elk horns—a sight quite common in some parts of the West.

Dear Little Boy Blue!

By Anne Porter Johnson

LITTLE Boy Blue, O Little Boy Blue.
Jump up, jump up, for there's work to do!

The cows are reaching over the gate,
The pigs are mourning the long, long wait,

Old Tige is ready to bring the sheep.
Little Boy Blue—why, he's fast asleep!

Little Boy Blue, O Little Boy Blue,
Look out or you'll sleep the whole day through!

The clock is striking—can it be eight?
School bells are ringing and you'll be late,

Then a lad I know will surely weep.
Little Boy Blue—why, he's still asleep!

Little Boy Blue, O Little Boy Blue,
What wouldn't I give to sleep like you!

To sail away to your land of dreams,
With its restful fields and healing streams,

To waken and find the world all new:
Little Boy Blue, dear Little Boy Blue!

Crop Protection, Sure

IN POTTAWATTAMIE COUNTY, Iowa, a herd of deer committed depredations on the farm of L. C. Ward and others. Mr. Ward, in order that the law protecting deer might be tested, killed one of the deer and delivered the carcass to the game warden. He was arrested. The district court found him guilty of a violation of the law, but the Supreme Court, on appeal, decided that a farmer has a right to protect his crops regardless of game laws.

A Girl's Room

By Alice P. Mills

THE decorations and furnishings in a girl's room should be kept simple. The curtains, hangings, dresser scarfs, and pincushions, even the toilet articles, should all be of such materials that they may be cleaned easily.

Thin, sheer materials make the daintiest covers for dressers and tables, while the side curtains may be of heavier cretonne or linen over thin white muslin. Toilet articles of celluloid are in better taste than those of heavily embossed,

plated silver, which become tarnished.

The woodwork is always nicest when painted cream-white, while the floor should be either stained or painted, and covered with a large rug or small ones. Rag rugs are as fitting as any floor covering, and they come in lovely colors. You may sew the rugs and have the rugs woven to order, and obtain just the shades desired by having dyed the colors yourself. The walls may be papered in a plain, striped, or flowered paper, or tinted, or even painted, in a clear, flat tone. Plain ceilings are always most restful, and if figured walls are present it is best to have the hangings plain also.

Born Upon the Farm

A NEW YORK banker recently paid a high compliment to the farmer boys.

He said: "Do you know that this great metropolis of New York cannot raise boys or men enough to run its banking business? Out of thirty-five men connected with our bank, only thirty-three were born upon the farm, and all the rest in the city!"

And yet people still ask why the boys leave the farm! They are needed in the

cities to conduct the great commercial concerns.

THE University School of Agriculture of Nebraska will be open henceforth for pupils as young as fifteen years old. This will enable students to go right from the eighth grade with no time spent in the high school.

Town Sprouts on Government Railway

IN THREE months' time the town of Anchorage, Alaska, has grown from 10 to 2,500 people. Anchorage is the southwestern terminus of the government railroad now building. Most of the land sold belonged to the Government. Lots of one-fifth acre in size sold for about \$300.

Winter Wren

By H. W. Weisgerber



WHAT joy and satisfaction a good view of one of these little birds gives the observer. And what a queer bird he is, anyway. For he is nearly as broad as he is long: a short, dumpy specimen, with scarcely large enough tail to balance him; and what there is of it is so short, and it usually points toward his head instead of sternward, as it should. He bobs about just as if he stood on springs and were unable to control himself. In this respect he is worse than his cousin, the house wren.

Like the wren family, he likes to play at hide and seek with the observer. We may see him enter a brush pile, but somehow he manages to slip out and get away without being seen.

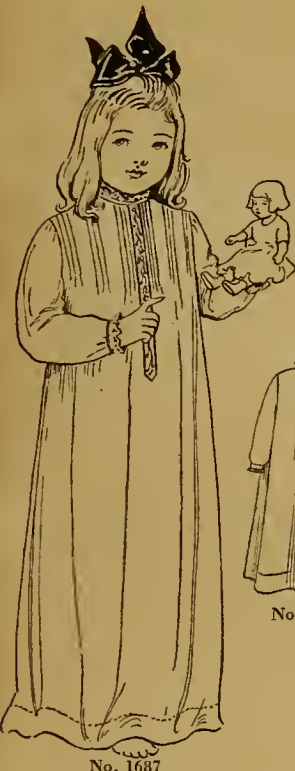
His general color is a cinnamon-brown above, lighter underneath; tail, wings, and sides barred with black.

A BEE is said to fly about 48,000 miles in order to get one quart of honey.

Clothes to Make Winter Weather Comfortable

TEN CENTS is the price of each pattern shown on this page. Order from Pattern Department, FARM AND FIRESIDE, Springfield, Ohio.

No. 1687—Girl's Tucked Nightgown. 6 to 12 years. Material for eight years, four and three-fourths yards of twenty-four-inch. Pattern, ten cents



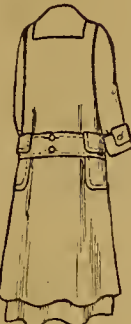
No. 1066—Night Drawers with Plain or Full Sleeves. 2 to 8 years. Material for 6 years, three yards of thirty-six-inch. Pattern, ten cents



No. 2897
No. 2898



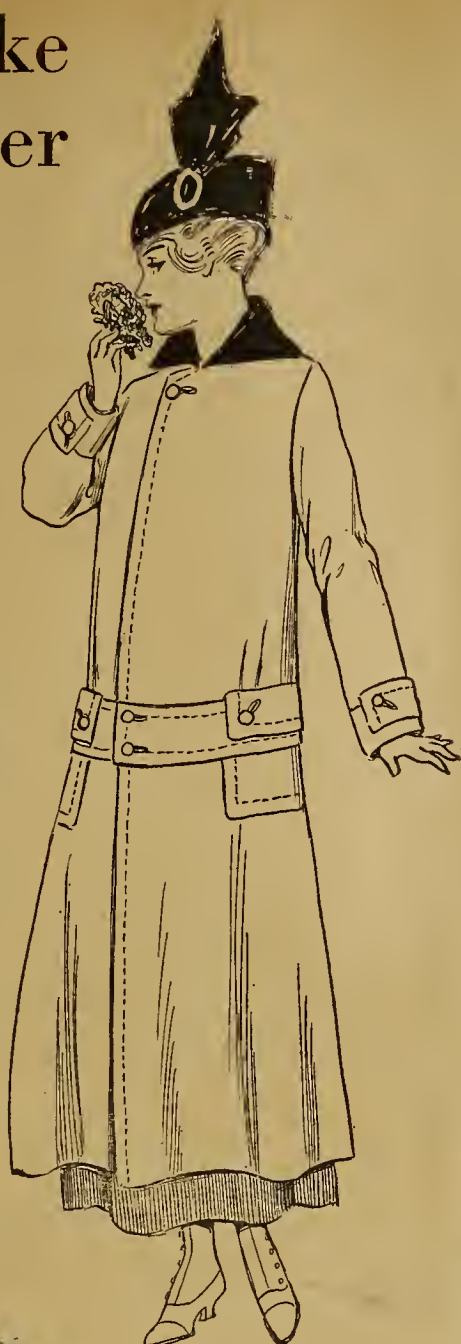
Made from pattern No. 1066 these night drawers are most comfortable for cold weather



No. 2677



No. 1066



No. 2677—Long-Waisted Top Coat. 32, 36, 40, and 44 bust. Such a coat as this can be easily made at home, as there are no difficult seams to fit. The price of this pattern is ten cents



No. 1461—Fitted Corset Cover with Seams to the Shoulders. 34 to 44 bust. Pattern, ten cents



A convenient nursing corset cover made from pattern No. 1316



No. 1461



No. 1316

No. 1316—Simplex Nursing Corset Cover. 36 to 44 bust. Pattern, ten cents

No. 2897—Waist with Left-Side Closing. 36 to 48 bust. Pattern, ten cents

No. 2898—Six-Gored Skirt, Left-Side Closing. 26 to 38 waist. Hip measure in 26-inch waist, 40 inches. Width, three yards. Pattern, ten cents

Big Ben



At Home on the Farm

In your room, or son's, or beside the hired man's bed. It's all the same to Big Ben for he's right at home. He knows it's his business to be first one up and to wake the others in time for morning chores.

Leave it to him to rouse the heavy sleepers — men who work long hard days and sleep like logs at night.

He's at home on the farm and earns his keep the very first day, same as he's doing on thousands of farms.

If your dealer hasn't him, a money order addressed to his makers, Westclox, La Salle, Illinois, will bring him postpaid. \$2.50 in the States — in Canada, \$3.00.

BUY A FARM

in the

NATION'S GARDEN SPOT

VIRGINIA, North and South CAROLINA
GEORGIA, ALABAMA and FLORIDA

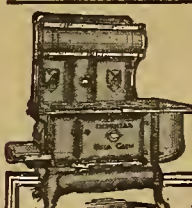
Land is reasonably cheap, and soil and climate just right for gardening, fruit growing, poultry, live stock, dairying and general farming.

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Just a few cents will brighten up your parlor, kitchen, bedroom, hall—make your home radiate with light, charm and freshness! Send your name on postal for new book of 75 exquisite, actual wall paper samples. Prices from 6c per double roll up, saving you 7c to 30c per roll.

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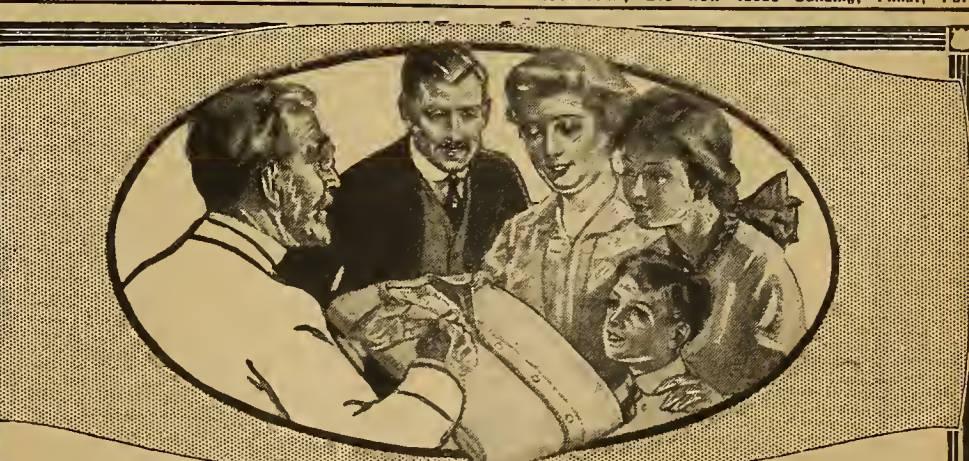


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CAN YOU SOLVE THIS PUZZLE?

LOW SIN Can you rearrange the letters in these two words in the squares so as to make one word—the name of a great PRESIDENT? If so, send the NAME and a 2c stamp and I will enter you in this novel AUTO CONTEST with 2,000 votes and send you a 25c CASH coupon and a SURPRISE PACKAGE explaining my plan. The auto goes to the winner freight paid, all ready to jump in and start. Do you want it? Reply quick. THE AUTO-MAN, 246 New Ideas Building, Phila., Pa.



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VELLASTIC is made the "health" way. Scientists agree that air is a great non-conductor of heat and cold. VELLASTIC with its thick, fleece lining keeps a cushion of warm air next to the skin. The porosity of the ribbed fabric keeps this aerated fleece dry and hygienic. The fleece, besides protecting the body from draughts and colds, is gratefully pleasant to the skin, while the elasticity of the ribbed fabric permits perfect freedom of movement, and gives smooth, snug fit. VELLASTIC is so well made, so strong in fabric and stitching that it is good for two seasons' wear and will save more than its cost in doctor's bills. Write for booklet No. 26.

UNION SUITS \$1.00

For MEN, WOMEN
and CHILDREN

SEPARATE GARMENTS 50c.

UTICA KNITTING CO., Makers

Utica, N. Y.



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FOR MEN

Safety First, Last and All the Time—against Sudden Chills, Colds, Pneumonia and Rheumatism.

Famous over half a century for its superior qualities.

Every garment shaped to the figure and **guaranteed not to shrink.**

Glastenbury Two-Piece, Flat Knit Spring-Needle Underwear is made in fifteen grades, several weights of fine wools, worsted and merino.

See special feature of **adjustable drawer bands** on

Natural Gray Wool, winter weight.....	per garment	\$1.50
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Natural Gray Worsted, light weight.....	per garment	1.50
Natural Gray Australian Lamb's Wool, light weight.....	per garment	1.75
Natural Gray Worsted, medium weight.....	per garment	2.00
Natural Gray Australian Lamb's Wool, winter weight.....	per garment	2.50

For Sale by Leading Dealers.

Write for booklet—sample cuttings. Yours for the asking. Dept. 21.

Glastenbury Knitting Company, Glastenbury, Conn.

The Housewife's Club

Layer Cakes

IN THE small family where it is often difficult to provide sufficient variety without too great an abundance the following method of handling layer cake may prove advantageous. Any good layer or white cake can be used, just so that it is large enough to be baked in a large square tin, making a sheet an inch and a quarter or an inch and a half in thickness.

When cool, divide the sheet into three portions and split each, as needed, using a different filling for each portion. Whipped cream, sweetened and flavored, is a delicious filling for the first portion while still fresh from the baking. It should be used as a filling and as a top dressing, making generous use of the cream. For a second portion a cream filling made of one cupful of sweet milk, one tablespoonful of cornstarch, stirred into one-fourth cupful of sugar. To this add the yolks of two eggs, left from the cake, and a little cold milk. Stir this into the boiling milk, and when thick enough cool and flavor with vanilla. Spread this between and over the slices of cake.

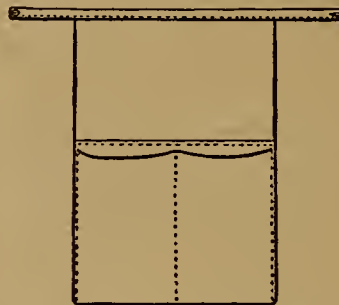
Chocolate filling and icing may be used on the remaining portion, or any desired filling. In this way one has three distinct cakes from one baking, and as the several fillings are added only as they are required, the freshness of the cake is quite equal to that of a newly baked cake.

A. W. O., Ohio.

Round Layer Cakes are far finer if baked in a large straight-sided pan, similar to an angel-cake pan but without the tube, and then sliced into four layers. This does away with the objectionable crusts, and results in a much more delicate cake, and one with perfectly even sides. If desired, the round cakes may be halved or quartered and used for different kinds of filling to advantage, especially for the home table.

H. K.

Clothespin Apron—Use a piece of denim or ticking about 30 inches long by 20 inches wide. Hem one end, turn up 15 inches, sewing seam inside, then stitch through center, making two pockets.



Hem sides, and put band across top, with button and buttonhole. Filled with new clothespins this is a nice little gift for a bride's kitchen shower. Mrs. W. H. D.

Tasty Pick-up Sandwich—Lunch crackers, peanut butter, mixed pickles, mayonnaise. Spread the crackers lightly with butter and cover with the peanut butter. Slice very thinly small cucumber pickles and arrange a row of the slices around the edge of the cracker, first spreading a layer of mayonnaise. Slice small white onions and arrange a row inside the cucumber slices, allowing the edges to lap. Mince finely a bit of red pimento and fill in the center, or a slice of pickled cauliflower may be used for the center and

the pepper arranged in a circle or in dots about it. These sandwiches make a good accompaniment to lunch or supper.

A. M., Iowa.

Oysters for Invalids call for delicate cooking. They should be served as soon as the gills begin to ruffle. An invalid often appreciates a few oysters put on a square of toast and allowed to stay in the oven till the gills curl, and then served with a little butter, salt, pepper, and lemon juice.

Clothesline Box—Almost every housewife who is not the fortunate possessor of a galvanized clothesline always ready for use, would be glad to have a box for her line like the one illustrated.

First make a box of convenient size with a sloping roof. In this, midway between top and bottom, fit a spool or reel upon which to wind the line. This can be turned by a small crank from the outside. For the purpose of locking the reel when the line is stretched, or of loosening or tightening it, bore several small holes inside the circle of the crank's travel, and use a plug to hold the crank at any particular place. Fasten the box securely to the top of a post, or attach it to the side of a building. The front of the box should be fitted with a hinged door.

ORA STILL, Ohio.

Cabbage with Corn-Meal Dumplings—The cabbage is quartered, and cooked with a piece of "side meat" till very tender. Then put some of the soft white cornmeal into a bowl, salt it, pour on enough of the boiling "pot liquor" to moisten slightly, and add water to make the dough just stiff enough to pat into cakes, about half an inch thick and as big as the top of a tumbler. Drop these on top of the cabbage, and let them cook about twenty minutes. Maybe it takes Southern blood to enable one to enjoy these, but they are extremely good to most people.

Orange Taffy Cake—Another cake that calls for molasses is made rather unusual by the use of orange as flavoring. Two cupfuls of molasses, one cupful of shortening, one egg, one cupful of warm water, four cupfuls of flour, two teaspoonfuls of soda, and the juice, pulp, and grated rind of an orange. Bake in muffin pans or in a loaf, as desired.

Casserole of Rice—For this it is better to cook the rice fresh, using sufficient to line a tin mold of convenient size, making the lining nearly an inch thick on bottom and sides. For the filling use two cupfuls of finely chopped veal or other meat, seasoned very highly with salt, pepper, celery salt, onion juice, and lemon juice. To this add one and one-fourth cupfuls of cracker crumbs, one egg slightly beaten, and enough hot stock to make it stick together. It should not be too moist or too dry. Fill in the center of the mold with this, leaving a space of about one inch at the top for a cover of rice. Smooth off, put on the buttered lid of the mold, and steam forty-five minutes.

Serve on hot platter, garnished with parsley.

O. L. F.

Knitted Oval Doily



This pretty doily will just suit most tastes. It can be made by anyone who uses the needle. The complete directions for making it will be sent for four cents in postage stamps. Address Fancy-Work Editor, Farm and Fireside, Springfield, Ohio

Get This 45c One-Quart "Wear-Ever" Stewpan For only 25c

Aluminum utensils are NOT "all the same." Be sure you get "Wear-Ever." Look for the "Wear-Ever" trade-mark on the bottom of every utensil. If it is not there, it is not "Wear-Ever." Refuse substitutes.

So that you can see for yourself—if you do not already know—the difference between "Wear-Ever" and flimsy aluminum ware, this special offer is made. We know that when once you have tried "Wear-Ever" ware, you will not be content until you

Replace utensils that wear out with utensils that "Wear-Ever"

Write for Booklet, "The Wear-Ever Kitchen," which explains how to improve your cooking.

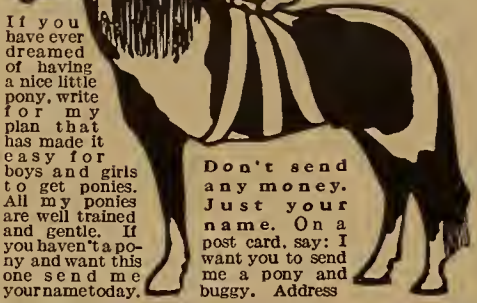
WANTED. Men to demonstrate and sell "Wear-Ever" specialties. Only those who can furnish security will be considered.



The Aluminum Cooking Utensil Co. Dept. 57, New Kensington, Pa., or if you live in Canada, Northern Aluminum Co., Ltd., Toronto, Ontario. Send prepaid 1-qt. "Wear-Ever" stewpan. Enclosed is 25c in stamps or coin—money refunded if not satisfied. Offer good until Dec. 20 only.

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BOYS and GIRLS Shetland PONIES GIVEN



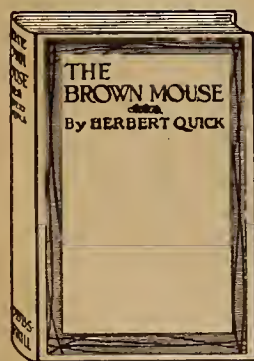
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Herbert Quick's Great Story



IN BOOK FORM AT LAST

Practically all our old subscribers will remember The Brown Mouse, which ran serially in *Farm and Fireside* this year. To these patrons who had the pleasure of getting acquainted with Jim Irwin, Colonel Woodruff and Jennie—Mr. Quick's delightful characters—nothing further can be said in behalf of the story. It spoke for itself as is evidenced by the flood of requests we received in every mail for the story in book form. To those patrons who failed for any reason to read the story, we wish to say that The Brown Mouse has been endorsed by prominent educators as the greatest book ever published on the subject of rural education.

W. A. HENRY, Emeritus Professor of Agriculture, University of Wisconsin, writes—
"THE BROWN MOUSE is an epoch-making book in the great movement to put rural education on a sound, abiding basis. Once it gets in the family it will be read by all from dad to the kids."

Mr. Quick believes that the largest single problem in American life is RURAL EDUCATION, because it has to do with that third of our people who feed the other two thirds. He tells here the story of a Lincoln-like farm hand, a genius in blue jeans, who upsets his own district—and in the end the whole country—with a new kind of rural school. It is a well-written story, full of heart interest, astir with characters breathing the breath of life.

The book contains 310 pages—size 5 1/4 by 7 1/4 inches. Illustrations by John A. Coughlin. Handsomely bound in dull red cloth. Sells in all book stores for \$1.25.

FARM AND FIRESIDE'S SPLENDID OFFER Good for Twenty Days Only

FOR \$1.25

We will send you FARM AND FIRESIDE THREE YEARS and mail a cloth-bound copy of THE BROWN MOUSE, charges paid.

We Have Only a Limited Number of the Books in Stock, Therefore Cannot Promise Delivery After TWENTY DAYS. Send Your Order NOW.

SEND ORDERS AND MAKE REMITTANCES PAYABLE TO

FARM AND FIRESIDE, SPRINGFIELD, OHIO

Make Your Spare Moments Pay Dividends

TAKE an afternoon off and spend it visiting among your friends and neighbors, and while you are about it take a copy of *Farm and Fireside* along with you and show it. We know you will be able to get several subscriptions. We offer valuable premiums for small clubs. Look over the offers below and then get busy to-day—right *now* while the impulse is warm.

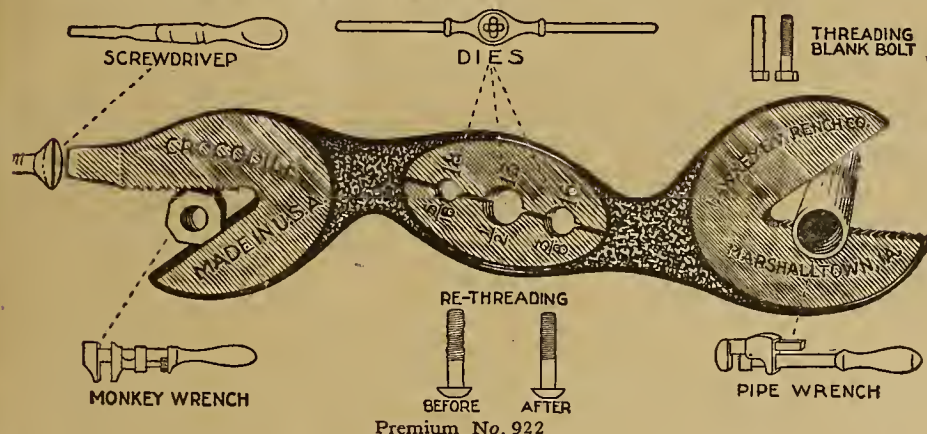
HELP THE FAMILY TO GROW

WE *Farm and Fireside* folks sincerely believe we are publishing a paper that is a real help and inspiration to its readers. We want to spread the gospel of better farms and homes as widely as possible. To this end we ask our old readers—those of you who know our aims and purposes—to help us by inducing your friends and neighbors to subscribe for *Farm and Fireside*. We make a special club rate of 35 cents per year when two or more subscriptions are sent in together. We offer some valuable presents for small clubs. Look over our offers herewith and then get out and help the good work along.

You can have any of the premiums offered below either with your own renewal or for a club of subscriptions—we would much prefer to have you send the club and thus secure the premium without cost. We want your *co-operation* as well as your *patronage*.

The Famous Crocodile Wrench

Sent FREE for a club of THREE yearly subscriptions to FARM AND FIRESIDE at 35c each OR with your own renewal alone for one year for 70c.



This wrench combines six handy farm tools in one. It is drop forged from the finest tool steel and scientifically tempered. It is guaranteed against breakage. Weighs ten ounces and is 8 1/2 inches long. The illustration above depicts its various uses. Dies and teeth are case-hardened in bone-black. Dies fit all bolts used in construction of standard farm machinery. Sent by parcel post prepaid.

One-Half Dozen Teaspoons

Sent FREE for a club of THREE yearly subscriptions to FARM AND FIRESIDE at 35c each OR with your own renewal alone for one year for 60c.

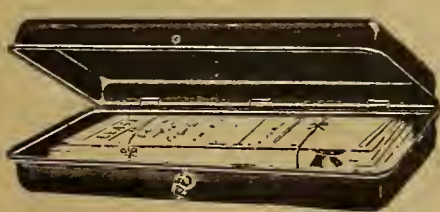


Premium No. 879

This set of six teaspoons is a very attractive premium bargain for the housewife. The spoons are Australian silver dutifully designed in the Wild Rose pattern with a unique French-gray finish. In design, workmanship and general attractiveness these spoons will compare favorably with many of the articles offered in our very highest priced silverware. This spoon is the result of a special white metal process work which in many cases is taking the place of solid silver. The spoons are backed by the manufacturers' guarantee and also by the *Farm and Fireside* guarantee of satisfaction. Sent postpaid.

Black Enameled Document Box

Sent FREE for a club of THREE yearly subscriptions to FARM AND FIRESIDE at 35c each OR with your own renewal alone for one year for 75c.



Premium No. 950

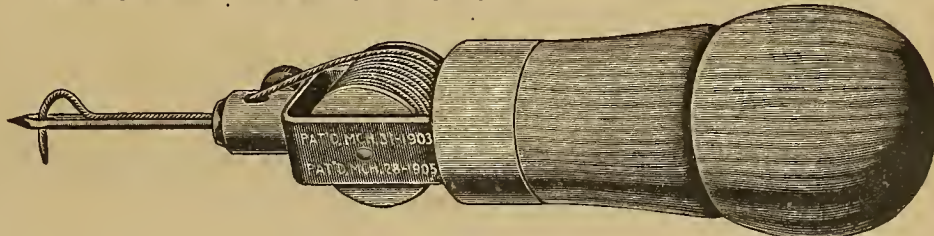
In this handsome Steel Document Box, we offer something that will fill a long felt want; a means of protecting your private papers from loss and prying eyes. The box is 11 inches long, 5 1/4 inches wide and 2 1/2 inches deep (inside measurements). It is ebony finished, fire resisting, and fitted with a spring lock and two keys. It offers a safe means of filing away in one place papers that you are likely to need at any time. We send the box to you by parcel post with all charges prepaid.

DON'T FORGET YOUR RENEWAL

WHILE we are talking about your friends and neighbors subscribing for *Farm and Fireside*, let's not lose sight of YOUR renewal. Just glance at the label on the first page of this issue of *Farm and Fireside*. It will indicate the month and year your time is out. If your subscription expires soon, or within the next few months, send us your renewal, and extension will be given on your present subscription. We want all of our old friends back again during the coming year. We need your support and you need *Farm and Fireside*. Is there any reason why we should not continue to co-operate?

Patent Lock-Stitch Sewing Awl

Sent FREE for a club of THREE yearly subscriptions to FARM AND FIRESIDE at 35c each OR with your own renewal alone for one year for 60c.



Premium No. 700-A

This is the most practical Sewing Awl on the market. Its construction is so simple that any child can use it. Just the thing for sewing and repairing harness, belting, canvas, sacks, etc. Its possession will save many a harness maker's bill. This awl makes a lock-stitch with one thread and one operation. The outfit includes straight and curved needles, with bobbin and thread all ready for use. Each awl packed in carton with full directions. Sent postpaid.

Genuine 14-K Gold Fountain Pen

Sent FREE for a club of THREE yearly subscriptions to FARM AND FIRESIDE at 35c each OR with your own renewal alone for one year for 70c.



Premium No. 767

Please do not confuse this splendid pen with the kind offered for sale at 19 cents, 27 cents, etc. This is a high quality pen with patent feed and 14 karat gold nib tipped with hard iridium. Please bear in mind that a fountain pen is worthless for writing purposes unless the nib is of good quality. You can't buy pens with gold nibs for 19 cents. This pen is of the popular dropper filler style. Sent boxed with directions. Postpaid.

An Excellent 18 Size Watch

Sent FREE for a club of FIVE yearly subscriptions to FARM AND FIRESIDE at 35c each OR with your own renewal alone for one year for \$1.00.



Premium No. 762

This is the most popular watch made for men and boys. It is really astonishing how such a watch as this can be offered at such a reasonable price. It is the regular 18 size with highly polished nickel silver case, gilt-finish movement, open face and white dial with Roman figures. It is a stem-wind and stem-set watch and guaranteed to be accurate and reliable. Each watch is run and regulated before leaving the factory, and in addition to our guarantee the manufacturer sends a guarantee with each watch. Repairs not caused by carelessness or misuse will be made free of charge within one year from receipt of your order. It is without doubt splendid value, and you take absolutely no chance in ordering a premium that is backed by a double guarantee. Sent postpaid.

THESE OFFERS EXPIRE NOVEMBER 27

REMEMBER: You can include your own renewal in any club. If you send a club write the names and addresses plainly on a sheet of letter paper. If you only send your own renewal use the coupon on this page.

SEND ALL ORDERS TO
FARM AND FIRESIDE, SPRINGFIELD, OHIO

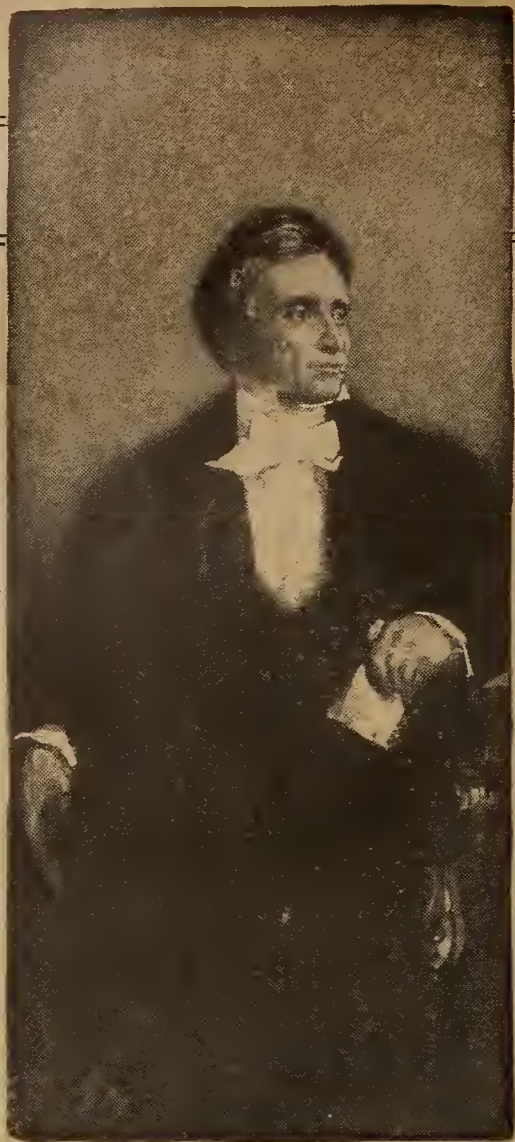
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Find enclosed \$..... for which send me FARM AND FIRESIDE one year more, also send me postpaid Premium No.

Name

P. O. R.F.D. No. State



After a painting by G. P. A. Healy in the Museum of the Brooklyn Institute of Arts and Sciences

Charles Goodyear

An Accounting to the American People

THIS MONTH marks the fiscal close of the most phenomenal year The Goodyear Tire & Rubber Company has ever known.

Goodyear tire sales were far, far greater than in any previous year.

They were far greater than the sales of any other tire in the world. Other Goodyear products registered an equally enormous gain.

It seems to us a fitting time to render an accounting to the American people, to whom we are indebted for this unprecedented prosperity.

And it also seems to us a propitious time to acknowledge another debt to one of the world's great industrial geniuses, who spent almost his last days in a debtor's prison.

What this business is, in its first and last essence, it owes to Charles Goodyear.

It was not founded by the man whose honored name it bears.

But it has brought to that name, at last, the world-wide eminence which was denied him during his life.

His indomitable spirit has been a never-failing source of inspiration—in every branch of its thousandfold activities—"his soul goes marching on."

Charles Goodyear was a man with a fixed idea—predestined, almost by reason of that fact, to disappointment, disaster and seeming disgrace.

His fixed idea was the vulcanization of rubber—and on this bed-rock idea there rests today that mighty industrial structure, the rubber business of the world.

In the remotest corners of the globe, wherever civilization pierces its way into the wilderness; in the jungles, and on the plantations, where millions of black men toil to satisfy the world's supply—*Goodyear means rubber and rubber means Goodyear.*

By right of inheritance, by right of adoption, by right of devotion to his high ideals, not merely the tire supremacy of the world, but the rubber supremacy of the world belongs to The Goodyear Tire & Rubber Company.

And so this business which perpetuates his name is also animated by a fixed idea.

And that fixed idea is that The Goodyear Tire & Rubber Company is bound to win this world-wide rubber supremacy if it simply upholds and maintains the goodness of Goodyear.

We believe firmly in the ultimate triumph of manufactured goodness.

We believe that the American people are everlastingly on the alert to find that which is worthy.

We believe they have awarded first place to Goodyear because they believe in Goodyear.

We are convinced that no one can take that place away from us as long as we are true to them, and true to ourselves.

And because we prize this good will as the most precious asset of this business, nothing unworthy shall go out into the world under the brand of Goodyear.

The spirit of Charles Goodyear stands guard over every operation and every department in these great factories.

It says to every man on the Goodyear payroll, from the highest to the lowest: "Protect my good name."

Wherever, and whenever, man, woman, or child, thinks of aught that is made of rubber—we want their second thought to be of Goodyear.

And to that end, we repeat—nothing unworthy shall ever go out of these great factories under the brand of Goodyear.

The Goodyear Tire & Rubber Company
AKRON, OHIO

F. A. Seiberling, President



Leading Goodyear Akron Products

Fabric and Cord Automobile Tires	Rubber Soles for Shoes
Laminated Tubes for Automobile Tires	Wingfoot Heels for Shoes
Automobile Tire Accessories	Lawn Hose
Repair Materials	Radiator Hose
Automobile Rims	Kantkink Garage Hose
Pneumatic Tires for Trucks	Steam Hose
Solid Motor Truck Tires	Suction and Miscellaneous Hose
Tires for Fire Apparatus	Goodyearite Packing
Carriage Tires	Conveyor Belts
Motorcycle and Cycle Car Tires	Transmission Belts
Motorcycle Tubes	Rubber Bands
Bicycle Tires and Tubes	Molded Goods
Aeroplane Tires, Springs and Fabric	Offset Blankets
Military and Other Balloons	Rubber Specialties

GOODYEAR TIRES

Thanksgiving Number

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U. S. Department of Agriculture

FARM *and* FIRESIDE

The National Farm Paper - Every Other Week

ESTABLISHED 1877

Saturday, November 20, 1915

5 cents a copy



PHOTO BY CLARENCE A. PURCHASE

His Last Strut



No Extras To Buy

Everyone about to buy an automobile is interested in cost—both first cost and after cost. Unless the car you buy really is completely equipped, its price does not at all represent the first cost.

The following is a list of equipment on the Maxwell Car with its approximate retail cost:

	Approximate Retail Cost
1—Electric Starting and Lighting System, Lamps, etc.,	\$95.00
2—High-Tension Magneto, - - - - -	50.00
3—Demountable Rims, - - - - -	25.00
4—Speedometer - - - - -	15.00
5—Clear Vision, Double Ventilating Rainproof Windshield,	12.00
6—Linoleum Covering for Running and Floor Boards,	8.00
7—Anti-skid Rear Tires (cost difference over smooth treads),	5.00
8—Electric Horn and adjuncts, - - - - -	3.50
9—Spare Tire Carrier, - - - - -	3.50
10—Oil Gauge, - - - - -	1.50
11—Robe Rail, - - - - -	1.50
12—Front and Rear License Brackets, - - - - -	1.50
Total,	\$221.50

If you purchase an automobile which lacks these features, you must add their cost to the price of the car if you want real automobile comfort.

Deduct this amount (\$221.50) from the price of the Maxwell (\$655) and then you will realize what wonderful value is represented by the Maxwell Car.

Think of it—a beautiful stream-line car, built of special heat-treated steel, with a powerful four-cylinder motor; thoroughly cooled by a gracefully rounded radiator of improved design and a fan—sliding gear transmission—semi-elliptic front and three-quarter elliptic rear springs, making shock absorbers unnecessary—one-man mohair top—high quality upholstery, and ample seating capacity for 5 adults, really fully equipped for \$655.

The high-priced car features mentioned, as well as the light weight of the Maxwell Car, account for the wonderfully low after-cost records of the Maxwell. The Maxwell is lowering all economy records for

- 1st—Miles per set of tires
- 2nd—Miles per gallon of gasoline
- 3rd—Miles per quart of lubricating oil
- 4th—Lowest year-in-and-year-out repair bills

See the new 1916 "Wonder Car" at the nearest Maxwell dealer's, and you will realize that it is the greatest automobile value ever offered.

Every feature and every refinement of cars of twice its price

Write for beautifully illustrated catalogue. Address Department A.G.

MAXWELL MOTOR COMPANY, Incorporated

DETROIT, MICHIGAN

FARM and FIRESIDE

—PUBLISHED BY—

THE CROWELL PUBLISHING COMPANY, SPRINGFIELD, OHIO

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Vol. XXXIX. No. 4

SATURDAY, NOVEMBER 20, 1915

Published Bi-Weekly

Our Thirty-Ninth Year

A Message from Editor Quick to Farm and Fireside Readers

FARM AND FIRESIDE is entering upon its thirty-ninth year. It was founded here in Springfield, Ohio, in 1877, as an all-the-year-round farm paper. It has lived up to its ideals, and to-day, as in the past, is a practical farm paper, edited by farmers for farmers. FARM AND FIRESIDE has been a success every one of these thirty-eight years. It has been a success because it has rendered service, because it has been helpful, and because it has been entertaining. Thousands of old subscribers testify to these facts. They testify in the most unmistakable way. Many of them have renewed their subscriptions for the thirty-ninth year. These time-tried readers do not need any promise or forecast from us of next year's FARM AND FIRESIDE. They know. From the past they know that FARM AND FIRESIDE in 1916 will live up to its own good record. But to the thousands of newer members of this huge FARM AND FIRESIDE family—over 600,000 strong—and to those friends and neighbors of theirs to whom we wish them to recommend FARM AND FIRESIDE, the National Farm Paper, I am writing this message of promise for next year.

First, we shall do intensive editorial work on FARM AND FIRESIDE, making two ideas sprout where one sprouted before. Just as you are better farmers year by year, and learn to know more about your land, your live stock, your orchards, so we, the editors, have been learning year by year more definitely what FARM AND FIRESIDE readers want in their farm paper. How do we know? Why, thousands of our readers have written and are writing us month after month asking for information and advice on all kinds of farm and home problems, and so we have learned. Our plans are well laid for many months ahead. Our motto will be: "When you have a thing to say, say it. Don't take half a day." Plain, clear writing, short and concise, nothing elaborate, nothing fancy. "Written so you can understand it" is one of our principles. "Written so that busy farmers have time to read it" is another.

More and Better Pictures

AND not only written so that the subject can be grasped, but illustrated as well. The pictures in FARM AND FIRESIDE are not designed simply to make the paper pretty, but to illustrate the points in the reading matter. Pictures place interesting facts more vividly before the mind than whole pages of written description without pictures. The farmer is a practical man—he wants to see a thing. Our pictures, the best and clearest that can be made, enable him to see it.

Once a month, in addition to the pictures illustrating the articles, we shall publish a full page of interesting photographs taken all over the world. We have published several such pages in recent numbers, and they have proved to be very popular with our readers.

We shall have a succession of great special articles, too many to list here, but I shall mention a few of them already waiting for publication, in the pigeonholes of my desk:

"Cattle-Feeding," by Schooler. He feeds for a living, consequently he knows his subject thoroughly.

"The Pine Plains Farmer." Reads like a story, but is in reality an account of successful farming operations.

EW

"Horse Troubles and Horse-Training," by Buffum, the best-known horse authority in the country.

"Farming for Profit," by that king of swine growers, Cownie of Iowa. You have read some of his articles before.

"Adventures in Bugdom: How to Fight Insects," by Burch. An article on the New South, by Moorehead, and many, many others.

Big Interest in Farm Machinery

HAVE you been reading the articles in FARM AND FIRESIDE about farm machinery? The articles we have already published on this subject have been wonderfully popular and helpful. Many more will follow in 1916.

Many a truth is told in the form of a story. You will remember that such was the case in "The Brown Mouse," my story that ran in FARM AND FIRESIDE last winter. This winter we are going to have a serial story, written by Edwin Baird, and entitled "The Baited Trap," which will make your long evenings pass pleasantly. It is a story of how a farm was used as a trap for a sucker. You will look eagerly for each instalment.

And in our plans for next year we have not forgotten the farmer's wife. FARM AND FIRESIDE recognizes the fact, you know, that the farmer's wife is the farmer's partner and as such is deserving of her full share of consideration in the farm

paper. A new series of articles on the lightening and improving of conditions of women's work on the farm will be contributed by Mrs. Vestal, who knows farm conditions thoroughly. We call it the "Dora" series, and we know you will like it. Of course we shall publish, as we always have, exclusive fashions and fancy-work designs, a large number of recipes and household hints.

How is your health? This is the most important of questions. Have you noticed our new department devoted to health topics? It is conducted by that experienced country doctor, Dr. David E. Spahr, who knows the farmer's health problems and those of the farmers' family as do few physicians. He is ready to help you with your health problems. Write him.

Are you in a "rut?" Many of us are and don't quite see how to get out of it. Sometimes it is pretty discouraging. We are going to publish dozens of letters of persons telling how they got out of their ruts.

And some articles for the young folks. We call them "The Junior Series."

The Farmer's Lobby. Just as soon as Congress meets, FARM AND FIRESIDE's Washington representative will be on the job again to report to our readers all the important measures before Congress that affect the farmer. The news from Washington is always interesting, but this year, with the tremendous problems before the country that Congress is going to tackle, you will read The Farmer's Lobby with greater interest than ever before. And remember this is but one of FARM AND FIRESIDE's regular departments. All branches of farm industry: Live Stock and Dairy, Gardens and Orchards, Crops and Soils, and Marketing Problems will have their regular space and treatment. This is my forecast of FARM AND FIRESIDE for the year 1916. Does it interest you, and do you want it? I hope you will say—six hundred thousand strong—YES.



Farm and Fireside in 1916 will be bigger and better than ever

The Editor's Letter

At Coolfont Farm, November 1, 1915

THANKSGIVING!

And we certainly have much to be thankful for. That goes without saying. Here we are, nearly a hundred millions of us, snugly berthed on a continent almost all our own, cut off by thousands of miles of sea from the peoples of a warring world, in the enjoyment of peace and plenty.

Peace! When to the east and the west, the north and the south, the great fact of existence is War.

Our neighbors on the north—the Canadians, our fellow Americans—are in the midst of war. Their agony comes home to us most of all, for they are nearer to us than cousins. They are our brothers. We know them, and respect them and love them. To the people of our border States, from Maine to Washington, the Canadians are closer, both in physical proximity and in that nearness of spirit which makes for fellowship, than Maine is to Nebraska or Washington to Florida.

The Canadians are simply not aliens to us, no matter what the laws and the flags and the oaths of allegiance may say. They are our sort. They understand us, and we know them. They are the best neighbors any nation ever had, and we can think of their troubles exactly as if they were our own.

And the youth of Canada is in arms. An army of young Canadians who would fit in nicely at a party in your neighborhood to-night—a larger army of them than Grant or Lee ever commanded—are in arms to-night, drilling on the green meadows of England or dying in the bloody trenches of Flanders.

Writes of a Son at Dardanelles

I GOT a letter yesterday from a friend of FARM AND FIRESIDE in New Zealand. In a postscript he wrote: "My son, Corporal Billy, is at the Dardanelles. He had several weeks in Malta recovering from wounds."

Only those few words; but we who still tell over the family traditions of the years from '61 to '65 can dimly realize what that New Zealand father and mother feel. Their boy was in battle at the Dardanelles. He was wounded. He is healed. He is back in the fighting line again—to suffer, perhaps to die on the other side of the world.

In Canada live very many members of the FARM AND FIRESIDE family. They will read this paper too. In thousands of homes, when this paper is read, there will be mourning instead of the rejoicing of our American Thanksgiving Day. And that is the thought which brings the dominant fact in the world to-day—War—very closely home to me as I write this.

Across the Rio Grande live the only next-door neighbors we have except the Canadians. Thanksgiving Day is a festival peculiar to the United States. It is not a Mexican anniversary; but if it were, it would be to the Mexicans a sadder day than it can possibly be to the Canadians. Canada is free and internally at peace; Mexico is lacerated from border to border by the claws of Revolution. Her people are still struggling with the problems of self-government. And in the struggle, the farmer is torn from his field; the field is trampled into sterility. There is no safety for the garnered crop, no assurance of a market for it, and no safe place for the money for which it is sold. There is even no such thing as real money. Better a thousand times the status of war-stricken Canada than the fever and gaugrene which are eating the body and soul of Mexico.

These are some of the sufferings of those with whom we share the continent of North America. Cross the ocean to the west and we find Asia, with the exception of China, embroiled in the war. India's armies are already in Europe or in Asia Minor, in conflict with the Turks, or awaiting the onset of their enemies at Suez. Siberia is sending many thousands of her hardy pioneers westward to that long battle line which reaches from Roumania to the Baltic.

And Europe! Why, Europe is one vast slaughter house. Never in all the world was there such bloodshed, such butchery, such scientific cruelty, such millions in arms, such a trembling of the earth under marching armies, such hate, such love, such agony, such woe, such anxiety, such sorrow, such pestilence, such famine.

In such a world as this there are not many of us who are without good cause to be thankful. We have sown and reaped in peace. Our cattle we take to pasture, knowing that no armed forager will drive them off. Our corn may have been frosted, our cotton may still be seeking its market, but the season as a whole has been a bountiful one, and as we sit at table we need only to compare our state with that of other nations in order to feel true thankfulness that Providence has given us a part to play to set off from the world's supremest agony.

I would not cloud the thankfulness of any soul. Yet there is a thankfulness which is near akin to meanness. During the Civil War I was a child in Iowa, and in our neighborhood there lived a woman who said something which illustrates my meaning. The Indians had gone on the warpath and massacred the settlers at New Ulm and other places in Minnesota. They had swept down into Iowa and wiped out the village of Spirit Lake. A spasm of terror swept across the sparsely peopled region in which we lived. All sorts of rumors went flying through the air. One of these

was to the effect that the Indians had killed and scalped the people of a settlement fifty miles away, and then gone off in another direction.

"Thank God!" said the wife of a neighbor. "Just so they don't come here!"

Let us try to avoid on this Thanksgiving Day this mean and cruel sort of thankfulness. I feel no joy in the fact that we are at peace while all the world is at war, except as I believe that our peace may be made to serve the cause of universal peace. For the money we make out of the war, let us try not to be thankful.

For the ability to give aid to the needy, in all war-stricken countries, to stamp out epidemics, to find homes for the homeless, to bind up the world's wounds, and to throw our influence on the side of a just and a permanent peace, may the Lord make us truly thankful.

These are about the only things for which any real reason for thankfulness exists.

Herbert Quick

High-School Farmers

By FRANK W. BALCH

LINKING the school with the home and with the farm is the one great accomplishment of the agricultural course of the Hamburg, New York, High School. The success of placing real agricultural work within reach of the high-school boys and girls has been exceptional in the Hamburg school.

Seven of every ten male students that are graduated from the Hamburg High School have taken up farming as a profession. Hamburg is in the center of a very rich agricultural district on which Buffalo's half-million persons depend to a big extent for their farm produce. Last June graduates from all departments of the school numbered seventeen, and all boys of the class but one intend to take up farming for a living.

The good effect of the course on students is reflected in the increased attendance at school for the full term from September to June. Since the course was started not one pupil studying agriculture has lost even a half-day for reasons other than illness. The course inspires the student, and appeals through its practicability to his parents. The study of truck-gardening at first presented a problem as to where the work would be done, but it was finally decided to have these operations carried on by the pupil at his home. Demonstrations and studies were conducted at these home gardens, though the rest of the agricultural course was studied in the school. The pupil was free to dispose of his garden truck as he desired. Nearly all sold the truck to neighbors. The school authorities retained the revenue derived from sales in the poultry department to meet the cost of operations. A part of the gardening course was studied in the school, such as lessons on hot-house management, study of planting tables and planning of crop rotation.

Summer-garden work at home, after school had closed for the year, was compulsory in order for the pupil to secure the required counts. The agricultural instructor visited the gardens of the students throughout the summer vacation and offered his services to parents and others in the school district. The Cornell rations for chick-feeding were used at home, as well as at the school during the school term. The Cornell schedule is considered as near a uniform, efficient system of feeding as is possible to use. It provides a certain method of feeding a fixed ration to poultry of varying age. For chicks less than a week old the Cornell system calls for a mixture of rolled oats, bread crumbs or cracker waste, sifted beef scrap of best grade, and bone meal. The method advocated is to feed this mixture moistened with sour skim milk five times a day. Mixture No. 2 is for chicks from five days to two weeks of age. The mixture consists of three pounds of cracked wheat, two pounds of finely cracked corn, and one pound of pinhead oatmeal. The method is to feed in light litter twice a day, with mixture No. 3 in dry form always available, and in moist form fed three times a day. The No. 3 mixture consists of wheat bran three pounds, three pounds of corn meal, three pounds of wheat middlings, three pounds best-grade beef scrap. In moist form it is mixed with sour skimmed milk. Chicks from two to four weeks old are fed same as those from five days to two weeks old, except that the

wet mash of mixture No. 3 is fed only twice a day. Cornell's mixture No. 4 is a combination of three pounds of whole wheat, two pounds of cracked corn, and one pound of hulled oats. This is fed to chicks from four to six weeks of age in litter twice daily, mixture No. 3 in dry form always before them, and No. 3 mixture in moistened form fed but once a day. Mixture No. 5 consists of equal parts wheat and cracked corn, and is fed from hoppers in connection with No. 3 in dry form to chicks from six weeks of age to maturity, with mixture No. 3 wet once a day if the fowls are backward in development.

At Hamburg the regular school hours of the forenoon are devoted to the regular school subjects, with certain periods of the afternoon devoted to agriculture. The course does not interfere with the other studies.

Of course the home-garden work was done after school hours as long as the school term continued. Some of these gardens covered plots as big as an acre; others were confined to small spaces in back yards. Potatoes, tomatoes, corn, and cucumbers were the four products most popular with the students. The home gardens are operated by the undergraduates, as the graduates secured farm jobs at once.

One of the graduates who entered Cornell this fall will have, when the two-year college course is completed, entire charge of his father's extensive dairy business, with two routes long established in Buffalo.

Because the gardening course connected with agricultural study at Hamburg is carried on by the students at their homes, the methods, as far as detailed work is concerned, vary slightly. For instance, one boy was able to construct a hotbed on designs approved by Cornell, three others were able to build beds not so elaborate but satisfactory, while one boy did not feel like meeting the cost of construction, and started some of his plants in south windows at his home.

The general method is to have garden plants started under glass, hardened in cold-frames, and transplanted, the soil previously prepared under supervision of the instructor by first-year students, and prepared without advice by the upper-grade students. The schoolroom lessons of planning, planting, and cultivation are then worked out in practice by the individual on his plot.

When the Hamburg school was opened September 7, 1915, the agriculture class showed a big increase in membership. The course for the first term, ending Christmas, was outlined by Arthur P. Williams, the instructor in agriculture. Poultry husbandry was taken up at the start. Advanced or upper-grade pupils planned to build more Cornell poultry houses and begin the trap-nest record-keeping of the pullets graded from the improved matings of last winter. Some of the students plan to enter exhibits in the Buffalo poultry show this fall. Eighteen Hamburg high-school pupils were enrolled in the agricultural course for the full ten-months term ending last June. Coops on school desks, egg-laying contests, feeding, incubation, hatching, and brooding of chicks in the school building proved novel and instructive features in high-school education.

The course did not end with the close of the school term. During the summer individual efforts in poultry were carried out by a majority of the pupils. The experience gained in the schoolroom was applied with back-yard flocks at home. The supervision of the school instructor was available. The back-yard flocks proved successful. Cost accounts exactly like those studied in the class-room were kept. Most of them showed a profit. First in the school course came the study of constitutional vigor in fowls, the feeding of the Cornell ration, and demonstrations of the various methods of feeding. Then followed later the operation of an egg-laying contest, the birds being placed in cages in the class-room.

The boys of the class performed all labor necessary for the maintenance of perfect sanitary conditions and general care of the fowls. Grit, oyster shell, charcoal, and mangel beets were used in connection with the Cornell rations.

Visit Big Near-by Poultry Plants

FOLLOWING the egg-laying contest, trips were made to big plants in the section for study of various types of house construction, interior fixtures, and management, and then, these tours completed, attention was given to other agricultural work, such as trimming trees, orchard-planning, dairy operation, and blackboard studies.

Late in the winter attention was again directed to poultry. Selection of breeding stock had long before this been accomplished. Then came the study of incubation, artificial and natural, and the actual operation of incubators in the school basement.

Management of the broods came next, and late in the spring the chickens were separated, and spare cockerels placed in fattening crates where, without exercise, they were fed a highly nutritious, easily digested ration of ground feed and sour milk. Following this came knife-killing, dry-picking, and marketing. Housewives paid top prices for these milk-fed broilers.

Gowanda, New York, also has an attractive agricultural course in its high school, and the Indian boys and girls on the state reservation are studying advanced agriculture, modern methods, under state supervision. At Niagara Falls, New York, a school children's prize-garden contest was conducted last summer. All seed was distributed free on application. Cold and disagreeable weather discouraged more than half the 1,000 pupils entered, but nevertheless there were more gardens in the Falls city than ever before, and nearly 200 boys and girls raised gardens.

TO BE sure, we had lived on a farm the greater part of our lives, and thought we knew all the ins and outs of farm life. We thought there were far more outs than ins. It took a few years of life in the city to teach us our idea was a mistaken one.

After we had been drought-stricken, and hail-stricken, and flood-stricken, and frost-stricken, and "low-price" stricken, we began to think old age would come slowly creeping on and find us poverty-stricken. We began to compare our lot, as we saw it then, with the lot of our city friends: they always wore good clothes; had money jingling in their pockets; went to picture shows, theaters, and concerts; attended from one to half a dozen clubs; supported an automobile; took vacations—"Oh, life in the city was truly a snap!" So we reasoned when the city bug stung us. "We would sell out and go to town! We would strike a get-rich-quick scheme there in a short time, and life would be one long summer dream!"

Accordingly, one beautiful day in early June, when everything was all abloom, a man came along, looked at our farm, saw its good qualities, noted its splendid location, just four miles from one of the most thriving cities in South Dakota, saw the possibilities of a big increase in the price of land within the next few years, and bought it, paying us our price of \$50 per acre. In a few days the papers were made out that transferred "our farm," the place where we had lived for ten years, to another man. But what matter? We were going to take life easy, and at the same time get rich.

That fall we had a sale, and sold off our stock and farming implements. After everything was all squared up we began to realize we were not so poverty-stricken as we had imagined. The receipts from our sale, which consisted principally of cattle, horses, and hogs, came to more than \$2,000, while we had bought our farm of 160 acres for \$30 per acre and sold it for \$50, netting a profit on that of \$3,200. So we had for our ten years' labor on the farm \$5,200—not a fortune surely, but neither were we quite poverty-stricken. But—"the city for us; life on a farm was drudgery."

Obtains a \$60-a-Month Job

SO IN the course of a few weeks we were cozily domiciled in a dream of a bungalow in Los Angeles. Through the influence of a friend my husband secured a position that paid \$60 a month. "Of course that wasn't much, but we four could live on that and pay house rent, and go to shows, etc., and save quite a little out of it every month," so we reasoned. The first month plainly showed us our mistake on that score. Our income and outgo tallied up something like this:

Income	\$60.00
Rent for bungalow	\$15.00
Meat, groceries, and milk	30.00
Vegetables	2.00
Light and water	2.50
Laundry (collars) .....	.50
	<hr/>
Balance	50.00
	<hr/>
Balance	\$10.00

Ten dollars! Ten dollars to buy clothes and shoes for two boys, the husband, and myself; and for car fare; tobacco for the good man; theater tickets; two club dues to be kept up; and for sundries.

Well, it didn't look very good, but—"He would get a raise soon; the other fellows were all getting from \$75 to \$150 a month. They could have everything they wanted and save a nice sum out of that." Time went flying by, and we were learning many things. We came to know that it was just as hard for the city man to get up at seven o'clock in the morning as it was for the country man to get up at five. Why so? Because his day's work is strenuous. Not physical labor so much, but he gives constantly of himself. The cry from employer to employee is ever efficiency, and still greater efficiency. He must not relax; he is ever on duty. He must smile at this person and that person. He dare not notice anyone's peculiarities, or oddities, or unreasonableness; and he can't possibly know what interesting (?) or aggravating (?) creatures human beings are until he comes to mingle with them day in and day out in a business way. Well, the result is he must find his relaxation in the evening; therefore the family rarely gets to bed before ten or eleven o'clock, and seven in the morning finds him just as sleepy and far less refreshed than five found him on the farm.

We found going to work for somebody else every day in the year, except Sunday and perhaps a two-weeks vacation, under somebody else as manager, didn't exactly suit our country spirit of freedom. We came to know that our friends saved scarcely a cent; and, furthermore, one couldn't exactly see how they were extravagant. In the city it seems unbelievably hard to separate one's luxuries from one's necessities.

We came to feel that the brilliant lights of the city at night, and the rattle of the trolley cars and the traffic of the busy

E-W

When the City Bug Stung Us

A Farm Family Planned to Live a Life of Ease in Town

By BEATRICE BRACE



One beautiful day early in June, when everything was all abloom, a man came along, looked at our farm, noted its good qualities, and bought it

streets, couldn't compare with our soft country moonlight, the twinkling stars, the plum trees all in blossom, the singing of the birds, the cackling of the chickens, the sun shining on a winter's morning on a world all white with snow.

And friends! We learned that people in the city didn't know the meaning of the word. They rushed around hither and yon, went to clubs, whist parties, receptions, lectures, and went calling—but friends, like we had in the country! Oh, no!

We stayed two years. The last year was spent in Kansas City. We had neither struck a snap nor a get-rich-quick scheme. Furthermore, we learned such things were myths. We learned the city man paid dearly for any privilege he thought he enjoyed in town. The long and short of it was, we were going back to the farm the next spring. We could profit by our experience.

One thing the husband and I early agreed upon: we would rent instead of buy. If we bought, that would mean putting every cent of our little capital into a payment on the farm and the stock and machinery to run it, leaving us absolutely no reserve. No one would think of trying to run any other business on such a basis, and why should farming be any exception? We believed that "nothing succeeds like success."

Keeps \$1,000 to Buy "Snaps"

SO IN order to keep an atmosphere of success and security about us, we planned to rent a farm, stock up well, and put \$1,000 in the bank at four per cent interest, and the rest on a good farm loan at six per cent interest. In the bank because it would be payable on short notice, so if we saw an opportunity for using a portion of it we could get it, something we could not do if it were on a farm loan or bonds.

We knew of a farm of 80 acres about six miles from an eastern Kansas town that just suited us, so one day the husband rented it for \$3 an acre.

We moved early in March. The house and barns set on a high rise with a gradual slope to the road. There were lovely old shade trees at the sides and front, and a nice orchard at the back. Just below the barn was a winding creek with its banks heavily timbered. This timbered portion came in a clover pasture. The farm was cut up as follows: 5 acres clover and timothy hog pasture; 15 acres clover and timothy pasture for cows, horses, and calves; 15 acres clover and timothy hay land; 40 acres for corn, and 5 acres for feeding yards, orchard, yard around house, etc.

The husband bought two good brood mares at a cost of \$400; four good Jersey cows for \$240; four Duroc Jersey sows for \$68; five dozen Plymouth Rock hens for \$30; driving horse and surrey \$300; incubator, harness, and necessary machinery \$262, bringing total cost for necessary equipage for farming up to something like \$1,300. A good deal was bought at sales,

making our expenses less.

The husband had always been very successful in raising hogs, so he decided to make that his money crop. He had always been more successful with old sows for mothers, raising larger litters of pigs and losing a smaller percentage while small, so he decided to keep

four old sows and raise a litter of pigs each spring and fall. By providing a warm, dry shelter for them he had no difficulty in raising fall pigs. All through the spring, summer, and fall they ran on the clover pasture. Their feed at all times was principally a slop made of milk, water, and oil meal, and plenty of corn and clover hay. They were sold as soon as they weighed 250 pounds, and brought from \$12 to \$15 each.

From the two mares he planned to raise colts, selling them when they were two years old. These usually brought \$250 a team. The cows were Jerseys. We sold the steer calves for veal, keeping the heifers. These we sold when two years old at about \$30 each. We planned to keep only four cows, as that with the chickens gave us money to keep up living expenses. We wished to keep the work down to what we could do ourselves with a little extra help.

We had 35 acres of corn and 5 acres of kafir corn for the chickens. After the corn was husked the hogs and cows were turned in on the stalks, as it was all fenced hog-tight.

The incubator we bought was a 150-egg size, and we set it twice early in the season, the first hatch coming off the latter part of March. We set as many hens as wanted to set at that time, and gave them enough of the incubator chicks so that each hen had about 20 chicks, and put the rest in the brooder. We found that by providing warm, roomy coops each hen could care for 20 chickens, and it was less trouble and more satisfactory for us. We planned to keep about 200 young hens, selling off the surplus each fall.

Of course our experience in town didn't lessen the danger of droughts, floods, etc., but we found by keeping out of debt and with a reserve fund in the bank we could meet these conditions. If we had a shortage of feed, we bought, even if we had to pay "the price." It paid to do it, for a farmer's salvation lies in staying in the game and using his brains; by getting on top and keeping on top; by mapping out a course and adhering to it; and not trying to do too much.

The close of the second year the proceeds from our farm were as follows:

60 hogs @ \$12	\$720.00
Milk from four cows	200.00
Chickens and eggs	270.00
Span of colts	250.00
Two young heifers	60.00
Total from sales	\$1,500.00
Rent for 80 acres at \$3 per acre	\$240.00
Help hired	50.00
Living expenses	500.00
	<hr/>
Outgo	790.00
Balance	\$710.00

Seven hundred dollars to bank—that looked pretty good to us. We added \$300 from our bank account and put it on a farm loan. We wanted to get at least \$6,000 before we bought again.

60 hogs @ \$12	\$720.00
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Chickens and eggs	270.00
Span of colts	250.00
Two young heifers	60.00

Total from sales

Rent for 80 acres at \$3 per acre

Help hired

Living expenses

Outgo

Balance

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Solves a Drought Problem Well

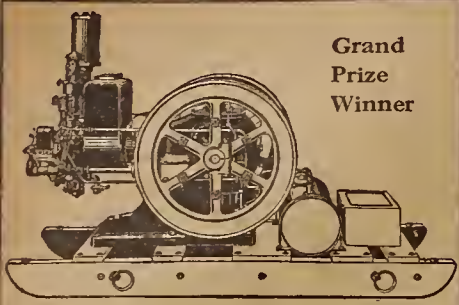
THE next year a drought struck us, the latter part of July. The husband waited as long as he dared for a rain to come and save the corn crop, but when he saw it was too late he immediately put a corn binder in the field and cut the entire field for fodder. As the hay crop was good, only a small portion was needed for our own use, so the bulk of it was sold at a good price during that winter and spring to our neighbors who were less far-sighted. That year we had to buy corn to fatten our 65 head of shotes, but even then we made a good profit on them. The kafir corn matured and made feed for our 200 hens and about 250 chickens. A rain did come the first of August, and some millet was sown, which matured.

At the end of four years we had \$2,000 out on a farm loan, drawing six per cent interest. The 80 acres of land we were on was then offered for sale at \$6,000, and we bought it, paying \$5,000 down. We were out of debt except the \$1,000 we then owed on the farm. We had all the stock, machinery, etc., we needed. We had had a good living all the time; books and magazines a plenty; no harder work than was good for us; plenty of friends, tried and true; a day's fishing now and then; a day in town when we wished—and we were happy.

It seemed to us, as we viewed our past experience with our present, that the secret of successful farming lay principally in having cows and chickens enough to supply all the necessities of every-day living, and some of the luxuries. We kept out of debt, for then it was easy to keep an atmosphere of hope and confidence and efficiency that enabled us to grapple with droughts, floods, and frosts.



We had a sale and sold off our live stock and farm implements. After everything was all paid up we found we had \$5,200 for our ten years' labor on the farm. This was not wealth, nor was it poverty



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What is an Automobile Worth?

As Other Readers See It

Motor Car Saves a Life

By Sophia Gabel

FATHER was prejudiced against automobiles and considered Neighbor Smith foolish to spend so much money for pleasure. One September night a violent thunder storm came up and lasted until midnight. About four o'clock in the morning my sister was taken ill. Mother tried to get the doctor on the telephone, but the storm had wrecked the wires.

The horses were in pasture after a hard day's work, and Father had gone to the World's Fair two days before. Then I thought of Neighbor Smith's car and ran through the darkness to him. He got his car out, and in less than half an hour the doctor was looking after my sister.

The doctor said that if he had not come just when he did it would have been too late.

The day Father came home we told him of his daughter's narrow escape from death. After that he could not praise the automobile enough. We now own a car, and evenings when the horses are tired we all go out for a little pleasure ride in the machine. Our family is much happier than it was five years ago.

Develops Manhood

By Mrs. R. C. Wellwood

WE LIVE ten miles from town and have a boy fifteen years old. He was not satisfied on the farm until we bought a car last year. Now he is the most satisfied boy one ever saw.

We paid a man a good price to teach him how to run it, and it was money well spent. He doesn't want anything better than a spin with the family, and we feel safe that he understands the running of it. An automobile makes a boy manly when he has the responsibility of taking care of the car. So it is money well spent.

Cars are Expensive

By Edward J. Erwin

INVESTED in a car of the \$1,200 class. At 6 per cent interest the \$1,200 would have brought me \$72 a year. So I will have to classify the \$72 as expense. Then comes the \$3 for the license. Every 10 gallons of gasoline that I used cost me \$1.80. I drove my car 5,000 miles, and the gasoline cost me \$56.34.

I used 10 gallons of cylinder oil and 10 pounds of transmission grease at a cost of \$6.50. I had the car insured against loss by fire for the year. This item was \$24. My garage bill for the year was \$12.

I used three tires (34x4) during the season. These cost me \$72.60. My total expense for the first year was \$246.44, and the second and third years were considerably more, for my repair bills were higher.

I have been driving my automobile for nearly three years, and from experience I would say that it's an expensive luxury.

Increases Profits

By Mrs. Elmer Van Sickle

MR. C. lives on his large farm six miles from town. Every year he has to harvest and ship from 11 to 14 acres of potatoes. He always likes to oversee and assist with the loading at the farm as well as with the unloading into the freight car. By means of his automobile he can be with the loads at both places.

This personal attention enables him to ship out produce in such a satisfactory way as to bring return orders the next season.

His wife and daughter have both learned to run the car, so in the evening they can take a ride to see their friends or go to an entertainment and come back refreshed and ready for a good night's sleep.

Car Isn't a Luxury

By W. H. Fleming

ACAR has always been looked upon as a luxury, and by many as an expensive and unnecessary one. But public opinion is rapidly changing. Watches were once considered luxuries, but the courts of Wisconsin have decided that a watch is as much an article of wearing apparel as a coat, and cannot be taken on an execution of a judgment. An automobile is certainly as much of a means of conveyance as a team and a wagon or carriage.

Is an automobile worth going in debt for? Yes, providing that the debt incurred does not bar the purchase of other necessary comforts of greater importance.

If the purchase of a car bars the procuring of sufficient wholesome food for the family, or the needed household furnishings, or necessary equipment for the kitchen, or farm implements, it is not worth the sacrifice. Wait until these more necessary things have been purchased.

Is the upkeep of a car a burden? No. If a car is properly cared for, cleaned, and covered every time it is brought in, the same as you would treat a fine carriage, the expense for repairs is but a trifle. I have run my car one season, more than 2,000 miles, and have not paid out five cents for repairs. As for gasoline and oil, these are much less than the feed and upkeep of horses and buggies.

Drives Blues Away

By J. C. Edwards

IF YOU wish to convert an old skeptic into a good roads advocate, get him to buy an automobile and he will vote good roads bonds next day.

Go to your business acquaintances in your new motor car and you will find your prestige has taken a great bound skyward and your credit is boosted.

If your wife has the blues and the children the wanderlust, an automobile is the greatest remedy in the world. And after an outing in the automobile, the whole "push" finds, on returning home, that they have imbibed lots of enthusiasm on the way, and will go off to their tasks singing and whistling, and they'll do more work than ever. And the hired man will declare you're the only man to work for.

Father will learn more about mechanics while attending his automobile than he ever thought existed. And before he knows it he has learned to apply these little mechanical ideas to nearly everything on the farm, and will be saving dollars that formerly went to the blacksmith.

Mother and the children will not mind economizing so much if they are having some pleasure while they are about it.

Now considering these facts as assets, sum them up and see if you don't think you can go in debt for an automobile and make it a profitable transaction.

Car Saves Time

By M. H. Pancost

HOW often do you make a special trip to town for supplies? Did you ever figure the value of your time which would be saved in a year by the faster speed of an automobile?

The automobile has really joined together places once considered distant. The horse has had a work to do in transportation, and still has, but the motor car is changing his work.

Aside from replacing the horse, there is one field which the horse has never seriously entered—that of the pleasure trip.

A farmer can pick up much valuable information on a 25-mile trip some Sunday afternoon. When you see something of interest, slow 'er down, and where there is nothing to see you haven't got to poke through it as you would with a horse.

Now add the value of time saved and profitable pleasure gained and you'll find that you have a balance in favor of the automobile, and at the end of the year, provided you used good judgment in getting a suitable car, and common sense in running it, you'll see how much too low your estimate was for unconsidered uses discovered.

Brings Contentment

By Mrs. Emmett Watkins

ISHALL tell you how a \$700 automobile brought contentment to an entire household. They were prosperous farm people owning their own land, but they worked hard and had no money to burn. In this family there was a girl of sixteen and a boy of eighteen years, both of whom were causing their parents much anxiety.

The girl would run off and go automobile-riding with a worthless young rogue who made enough to hire the machine. The boy would spend his evenings loafing at the village pool-room. Both children were planning to go to the city.

An agent persuaded the father to buy an automobile. The girl cried with delight, and said she would far rather ride

in her father's automobile. The boy was installed as chauffeur and had no time for loafing. Thus two young lives were probably saved, and at what cost? Let us see.

In this case the \$700 was in the bank drawing five per cent interest, \$35 a year, less than 10 cents a day. Not so dear to pay for contentment after all.

Worth Six Horses

By W. Carroll Spicer

FOR the farmer or poultryman living six or more miles from market, a motor truck is worth as much as three teams of light horses. I have reference to a truck that will carry 1,000 to 1,500 pounds.

When not running, it causes no expense, but horses eat every day, whether they work or not. In winter, horses are idle many days.

Now as for pleasure and instruction. An automobile will easily take you one hundred miles a day through parts of your neighboring counties that you have never seen, and teach you about the different soils, crops, and stock. It will give you a geological knowledge of the surrounding country.

Finally you will appreciate the true worth of an automobile when one of the family is ill. Your automobile will race swiftly for the needed assistance and return safely with it. Look at the loved ones around you, and I guess you can tell its worth to you.

Places Motor Third

By J. C. Shuler

TO SOME business men an automobile is a necessity, to others a luxury. But to the farmer the automobile should occupy the third place of farm accessories—first, home; second, education; and third, an automobile.

After the home is paid for and means of education provided, the farmer may consider the buying of an automobile.

When an automobile is bought there is no necessity for keeping a buggy horse, so it can be sold and the money paid on the automobile.

An automobile, if handled judiciously, can be kept for half the cost of keeping a horse. Now if we want to keep our children on the farm, their pleasure and comfort must not be neglected. If an automobile will keep the children with us, it is worthy of our consideration.

Car Proves Worth

By Mrs. W. J. Perry

OUR automobile has proved of priceless worth to us in the last three years.

Last summer one of our neighbor boys was mowing in the field when his team became frightened and ran away, throwing the young man in front of the sickle. One of his legs was cut very badly. They had no automobile, so they got my husband to take him to the nearest physician in our machine. Though it took a very short time to get there, the doctor said if we had been ten minutes longer the young man would have died from loss of blood.

My husband often says: "I think the money was well invested when I bought our automobile. How could we get along without it?" Especially in hot weather it saves the horses so much, when we have to go to town.

And then again, how all the family enjoy the cool drive in the hot summer evening after the day's work is done, without which it would seem almost impossible sometimes to go to bed and rest and be ready for the next day's work!

Brightens Life

By Mrs. Charles B. Corbin

WHAT is a fat bank account or hundreds of acres of productive land when one sees the dead hopes and sad life of our children, or the dreary days of the ever-sacrificing mother, married possibly in early teens? Every acre of land and every dollar in the bank represents blood-money; you can't take it with you when you die.

An automobile makes life worth living. It gives us pleasure to go to church, Sunday school, and evening services. It makes our young boys and girls love the farm when, with pride, we can step into our automobile. It is next thing to a real home in helping our young folks. We all can take pleasure in the evening ride after a day of labor, while our faithful servants, the horses, can rest and eat. We wouldn't think one moment of going if we had to drive a tired team.

When we think how fast we grow old and how short life's span is at the very best, we see but little real pleasure outside the home. Let's make it the dearest spot on earth. Get the automobile if there is any available chance.

Events Mostly Military

Uncle Sam Learns Many Lessons from the European War



The members of this regiment of Belgian cavalry are not afraid of a surprise attack or they would not go in bathing in the surf



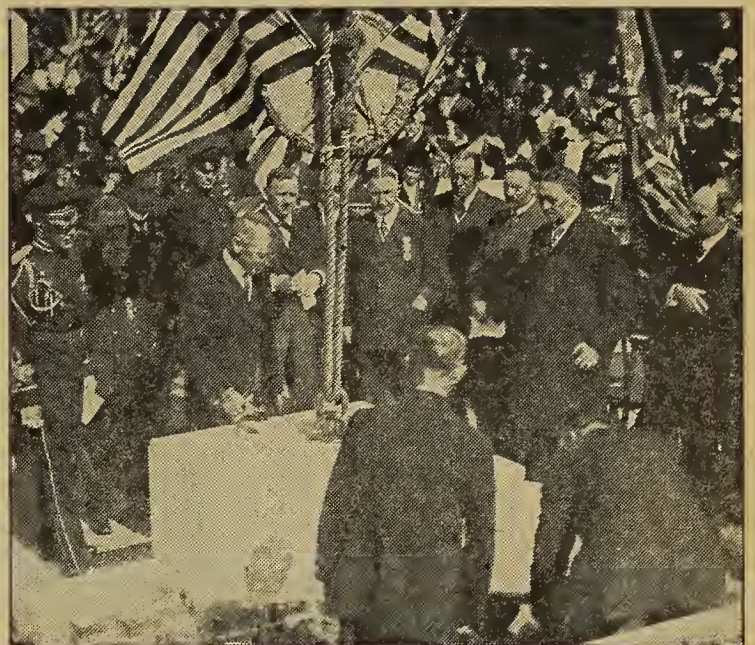
George Campbell of Washington, D. C.



President Wilson may spend next summer with his bride at Shadow Lawn, the home of the late John A. McCall, at Long Branch, N. J.



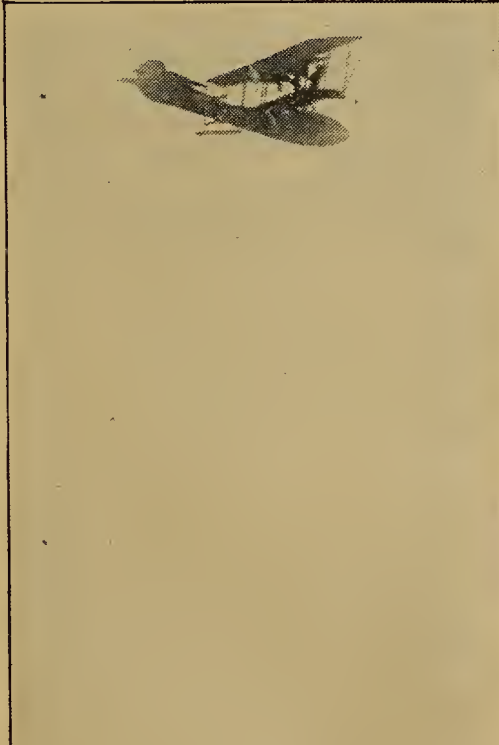
The keel of the battleship California was laid at the New York Navy Yard in Brooklyn October 14th, in the presence of Secretary of the Navy Daniels, Admiral Usher, and a host of guests and officials



The cornerstone of the amphitheater which is being built in Arlington National Cemetery was laid by President Wilson



The camera shows a shell after it was fired from a coast-defense gun



The German military bakery operated until recently in Laon was a busy place. This view shows where the bread was kept and where the soldiers received it



An aeroplane, flying low, has located a submarine. If the aeroplane and the submarine belonged to opposing nations in the European conflict there would be a lively fight. But both crafts belong to Uncle Sam. They were in the mimic naval war conducted by the Navy off the Atlantic coast recently. The attacking fleet won

FARM and FIRESIDE

THE NATIONAL FARM PAPER

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HERBERT QUICK, - - - - - Editor

November 20, 1915

Joining Things

SOME parents, when asked by their boys and girls for permission to join corn clubs, pig clubs, canning clubs, or to partake in any of the other present-day club activities, are reluctant to give consent for fear that the children's minds will be drawn away from what at first glance seems to be more important school duties.

They think that the pupils had better give their time to their books and not scatter their work over so many things.

This seems to be an error. In West Virginia, Mr. H. E. Brookover kept records of the work of fifty-three pupils, some of whom did and some did not belong to school clubs. Those belonging to clubs averaged twelve per cent better in attention to and interest in their classroom work, and fifteen per cent better in their examinations than those who did no club work; and they had a twenty-three per cent better record of attendance in the high school after they left the eighth grade.

This proves that the club work helped in class work and kept the children interested in school as they got older.

Something to arouse interest—that is the prime need of the schools.

Idle Freight Cars

MOST farmers ship more cars of freight than they receive. They ship bulky, low-grade freight, and they receive, mostly, the high-grade package freight.

Hence, the farmer is usually the sufferer when freight cars are tied up in the process of loading and unloading. We have had many periods of great car scarcity. But if every freight car could be loaded promptly when it is placed on the siding, and unloaded as quickly as the rules require, there would in all probability be plenty of available cars.

We are all interested in keeping the freight cars moving. Let us not complain when we are charged a dollar a day for demurrage if we keep cars idle too long. If every shipper in the country is charged the dollar a day and made to pay it, we shall not hear so many complaints of farm produce's rotting along the tracks for want of cars.

We should ask just one thing: that the demurrage law be applied with equal strictness to all shippers, without reference to their age, color, previous condition of servitude, or the volume of their businesses.

Our Credit Position

IN SOME ways the American people are fully abreast of the times. Perhaps we might say in most respects. We are recovering, however, from that old-fashioned American conceit which so disgusted the soul of Charles Dickens, and caused us to do so much strutting and boasting.

We know that in many respects other nations have much to teach us.

In the matter of a credit system for

farmers, for instance, we are a generation behind the times as compared with most European nations, and three generations as compared with some of them. That is why there exists the Rural Credit League of America, with headquarters in Washington. That also accounts for the meeting in Chicago, from November 29th to December 3d, of the National Conference on Marketing and Farm Credits.

These organizations are attempting to set in motion the forces which will put the United States abreast of the times, not only in farm credits but in marketing.

The Chicago meeting ought to be attended by a host of real farmers who are within striking distance of Chicago.

Neighborhood Specialists

NOT every farmer can bother to breed up a new and improved variety of corn or wheat or barley or rye. If we all fussed around with those things, farming as a whole would be neglected.

But in every neighborhood there is a place for one farmer who will do these things and thus build up a nice little seed business.

He would be a seed specialist. And it is



This Wake County, North Carolina, school cost \$7,200; has four teachers, an eight-months term, three years of high-school work, and a 3½-acre school farm

right in the line of the great seed houses.

We can't all trap-nest hens, and thus build up strains of 200-egg producers. But there is room for such a man in every neighborhood to breed foundation stock for the rest of the community.

Let the specialist do these things. He will do them better than most of us would do them. And when he does produce the better breed or variety, if we are wise, we shall study his product very carefully, and take advantage of his work by buying our stock from him.

We need more specialists along these lines, because for most of us the days are too full to admit of our doing the work for ourselves.

Extending the Doorstep

A HOUSE without a doorstep is poorly equipped. It is not a real house. No man feels that his house is fully equipped until he has a good, passable walk from the doorstep to the road, to the barn, around to the back door, and running about the place everywhere that every-day walking is done. These are merely extensions to the doorstep. Moreover, he wants and must have good roads about the place so that loads may be part, and an important part, of the farm. These he builds himself. They are a part, and an important part, of the farm.

The road to town is simply another extension of the doorstep. It leads a little farther out into the world, but this extension of the doorstep he cannot build himself. Other people use it, and it would not be fair for him to pay for it, no matter how short it might be. It would be expensive, and one farm could not stand the expense. It is a common doorstep for all the people.

So it has to be built by taxation. Wise expenditures along this line are among the most profitable possible. If a man

wants to sell his farm, a common doorstep of good roads running all over the countryside and out to other counties and States will be salable for far more than it cost. If he doesn't sell, the good road is a saving to any farm accessible to it.

This is a part of the doorstep which we can't build ourselves. Let us not stand in the way of its building merely because of the taxes. Let us demand state laws which will assure us good construction; but let us be for good roads.

Just Getting Started

ONE morning County Superintendent Judd of Wake County, North Carolina, visited the Holly Springs School. There was a school, but it had "neither house nor shelter," and was housed for the time being, amid discouragement and weakness, in an old rented building.

The people had refused to tax themselves for the money necessary to go on with the work of building a schoolhouse; but there was a school-betterment association in the district—and therein was this district better off than many a one with a fine building and a long year.

The Holly Springs District had recently purchased a ten-acre site for the unbuilt house. The county superin-

tendent suggested to the president of the school-betterment association that the people interested in the school—teachers, parents, and children—might cultivate two of these acres in cotton in the interest of that betterment which they all had at heart.

It was done. Rich and poor, young and old, male and female, worked at the cotton. "School-farm" working bees" made the crop, and made the people better friends. Even the fertilizer was donated; and as for asking for pay for labor, nobody thought of it.

This crop brought \$118.28—but it started that district on the onward and upward road, and now they have the schoolhouse shown on this page.

It has four teachers, an eight-months term, three years of high-school work, a domestic-science class of twenty, a garden growing vegetables for the school kitchen, an active school-betterment association, three and a half acres under cultivation in the school farm, and this beautiful brick schoolhouse which cost \$7,200—and every person in the district is richer than if these things had not been done.

This shows what the right sort of county superintendent can do with the right sort of help.

Sign Your Name

A FLEMING COUNTY, Kentucky, subscriber has asked FARM AND FIRESIDE a question of vital importance to himself, but he failed to sign his name to the letter. What can we do?

We have facilities for locating almost anyone if we know the person's name and his locality in a general way. But this man withheld his name.

Please sign your name to your letter and give your address if you want an answer.

Our Letter Box

Thank You!

DEAR FARM AND FIRESIDE PEOPLE: I have just been reading your magazine of October 9th, and must tell you that I have enjoyed it, every word of it. It is good. It is helpful, and it is cheering. I am an extensive magazine reader, and take delight in telling you that your paper is the most interesting of its kind that I have ever read.

Referring to your "Sunday Reading" page, you take up your subjects so wholeheartedly, so clean-heartedly. You believe in life and love, and in all the vital, beautiful things of life. Surely you have been on the farm, and have loved farm life, or you could not speak of it in the way you do.

Best wishes for your paper, which I read with both pleasure and profit.

N. M. P., Nebraska.

Expenses Not Heavy

EDITOR FARM AND FIRESIDE: I have just read with much interest the article in your October 9th issue, from our friend Mr. Fred Grundy.

I have just returned from a trip which included both expositions and all the principal cities of the Coast from Mexico to British Columbia, including also Salt Lake City, Kansas City, St. Louis, Cincinnati, St. Paul, and Chicago. My whole trip from Richmond, Virginia, to the above-named places and return was notable for the very reasonable rates at hotels and restaurants. I lived well, had plenty of good food and good clean rooms at a cost of about \$1.25 to \$1.50 per day, and while on the exposition grounds at San Francisco I got a very good lunch for 30 cents.

I write this because Mr. Grundy's experience was so far above mine in expense, and some people might be kept away by fear of high prices.

H. E. SMITH, Virginia.

Bad Cooking Causes Divorces

FARM AND FIRESIDE: Bad cooking is directly responsible for a large percentage of the divorce evil and much of the crime committed—in fact, it might well be classed as a crime in itself.

A good cook is the greatest statesman in the country in the true sense of the term.

Bank-examining is all well enough for its purposes, but the examination of cooks and kitchens is far more important. Of what avail are our pure-food laws if all food may be ruined in the kitchen?

No one should be permitted to cook in any public eating house who has not been examined, found competent, and licensed; and bad cooking—such as now exists in many public places—should be a misdemeanor punishable by law.

R. R. K., Ohio.

Dogs Gone Now


DEAR EDITOR: I am the man that had a good deal of correspondence with Mr. Quick in regard to the non-enforcement of the quarantine on dogs last spring. I owe him an apology for not answering the letter and acknowledging the receipt of the copy of the correspondence between him and the State Board of Health. The sheriff of the county came to our village and ordered all dogs running at large shot, and saw that the order was printed in the local papers. It had the desired effect.

F. L. DELAVAN, Michigan.

Can You Raise Flax?

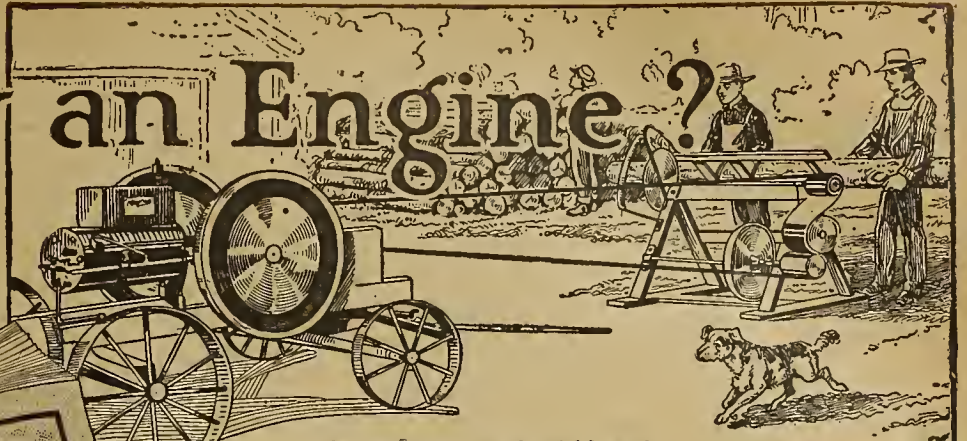
DEAR FARM AND FIRESIDE: It may be advantageous to some of your subscribers in regions where flax can be satisfactorily produced to know that at North Brookfield, Massachusetts, the only linen mill in the United States, and known as The Phoenix Linen Company, is very much handicapped by the difficulty of getting a supply of tow from Russia, on account of the war. The company has been able to get only a small amount of medium flax from Northwestern States.

To make the best linen the flax is not permitted to go to seed before being cut. The variety of flax that is grown for the seed is a different variety of flax from that which fine linen is manufactured from, and is not so profitable to grow. But to get the best results from flax grown for linen the right kind of seed must be used, and it must have scientific treatment and be cured according to the very best methods. The Agricultural Department at Washington will give all important information to those who desire to grow flax either for its seed or for linen, and probably the linen mill officials would be glad to furnish complete information. M. F. ROBINSON.

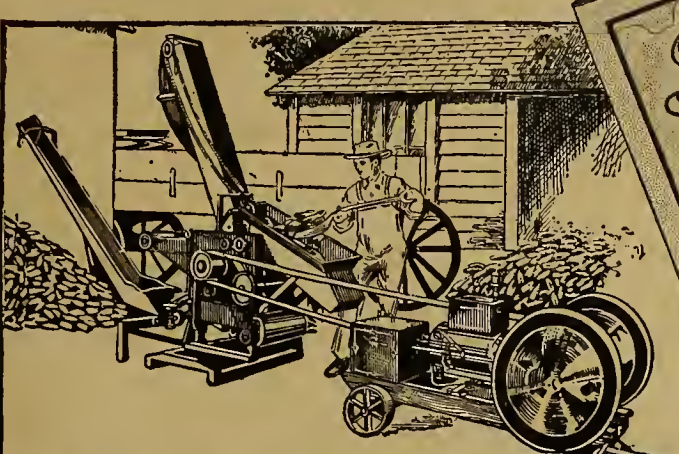


Going to buy an Engine?


Saving work and time and making money with a Maynard Engine in the farm power house



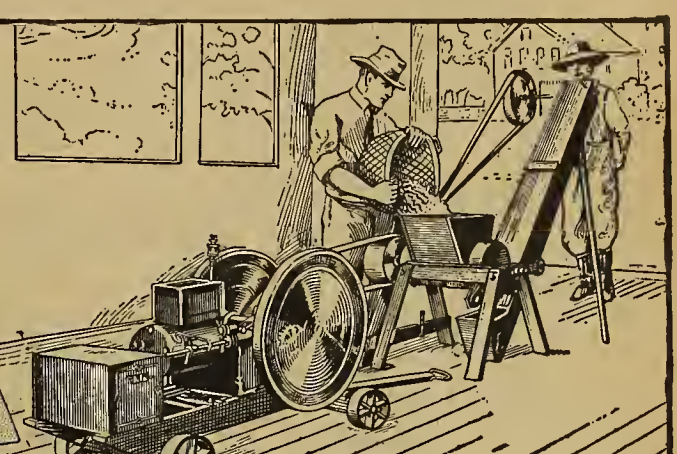
Saw your own wood quickly and make money sawing wood for neighbors with Maynard power



Shell your corn and shell corn for neighbors at a profit, with a Maynard Engine



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What Users Say

Kept Busy Filling Contracts
"I am pleased to say that I am more than satisfied with the Maynard Engine. It certainly is worth the price that you ask for it, and even the short while that I have had it, I am convinced that it was the best engine bargain that I ever made. I have had no trouble with it, so far, what- ever. My neighbors have kept me busy filling contracts for sawing wood for them. They are also somewhat astonished to find that so small an engine can do such powerful work. I am now making contracts for filling silos for my neighbors." — A. Vinckey, Hardwick, Mass.

Easiest to start. More than rated H. P.
"The gasoline engine I bought of you some time ago is giving satisfaction in every way, and is the simplest engine I have ever seen and is the easiest to start and will give more than the rated horse power." — Geo. H. Johnson, Barnville, Md.

Likes Easy Starting
"In regard to the 1 1/2 H.P. Maynard Engine I bought of you about 9 months ago—I have been using it all winter for pumping water, running grinders, empty wheel and little buzz saw, and will say I have never seen a more powerful engine for its rated H.P. Have ripped a two-inch hard maple plank on the saw. Another thing I like is the ease with which it starts. Also the simplicity." — S. A. Anduega, R.D. No. 6, Rome, N.Y.

12 H.P. Maynard Beats 15 H.P.
"The Maynard Engine I purchased from you some time ago has given the very best of satisfaction. I am doing the same work with my 12 H.P. Maynard that I used a 15 H.P. of another make on last winter. The 15 H.P. did not give power enough but the 12 H.P. Maynard does it with power to spare." — M. R. Swinger, Hightstown, N.J.

All we claimed—and more
"The Maynard Gasoline Engine, received from you last fall, has been all that it was claimed to be, if not more. I have had no trouble whatsoever, aside from an adjustment of the governor when it was first started. It starts promptly, runs evenly with but a single compression, does not heat even with my neglect to keep the water supply sufficient, has never balked once except for lack of gasoline, has all kinds of power for its size. Thanking you for giving me the worth of my money, I am, Very truly yours." — M. G. L. Rietz, Seward, N.Y.

Our Growth

Two years ago, we started in an eleven-story building. In one month, we had to add a six-story building, then a five-story and an eight-story building. We have now added our fifth great building illustrated here, 16 stories, the world's highest building of reinforced concrete. All because we give greater values than can be obtained anywhere else. Write for free engine catalog now.



BEFORE you decide on any engine write for this free book. Then make this test on your own farm at our expense. Try any size Maynard for 60 days, without sending us a penny. There is nothing on your farm that will be of so much help to you, nothing that saves so much work, time and money as a good power outfit. It's going to make a big difference to you whether you get the right engine or the wrong one. *There's a big difference in cost—and a still bigger difference in service.* There is no longer any reason why you should take a chance of getting anything except the right power outfit. After this 60 days' free trial, if you think there's a better engine made at any price, or its equal at anywhere near its price, return the Maynard at our expense. You don't send us a cent. This 60 days' trial is free.

There isn't a farmer in the land who cannot profitably use a Maynard on his farm. Our Free Book will prove to you that wherever a Maynard goes, it cannot help but save work, time and money, and make money for its owner.

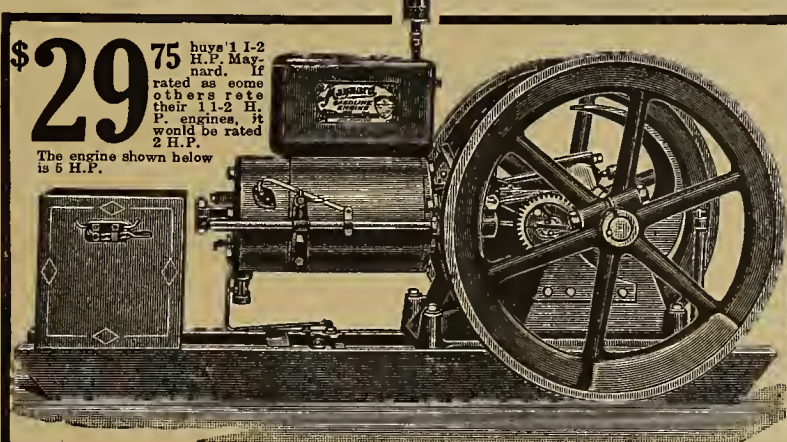
16 Big Features

Our Free Book shows 16 big advantages possessed by the Maynard, all of which are found on no other engine. It tells just what these features mean—why they make every Maynard so strong, so economical and so dependable. With your free book, we will send a Comparative Test Card which enables you to write down the merits of different engines alongside each other. This card makes it easy to compare every engine with the Maynard

point by point, and feature by feature, so you can judge for yourself wherein the Maynard is different and why it is better.

Rated Horse Power at Normal Speed

Actual factory tests prove that Maynard Engines develop greatly in excess of their rated horse-power. The 1 1/2 H.P. develops 1 3/4 H.P.; the 5 H.P. size develops 6 H.P.; the 9 H.P. size develops 10 1/2 H.P. and so on with all Maynard sizes. *And this excess power is developed at normal speeds.* If we speeded up our engines as some others do, we could claim much greater horse power. Remember, a speeded up engine is like a speeded up horse—all right for a little while but can't stand the strain. With every engine, we send the factory test sheet, showing what that



Send us no money you try it 60 days FREE

The best way to decide on an engine is to try it. We will send you any size Maynard for 60 days' test before you send us a penny. Give this engine any test you like. You be the judge, and if you are not thoroughly satisfied, return it at our expense. We will even return any freight charges you paid. Get our book—and you will see why we can afford to make such a liberal free trial offer. Mail coupon or just a postal.

engine developed just before shipment and at what speed.

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Our book quotes low prices that save you \$25 to \$300 cash, and shows you the safe, sensible way to figure engine costs. *Divide Maynard prices by eight*, then divide price of cheap engines by three and you will arrive at the cost per year. Read why no engine at our price will last as long as the Maynard—why no engine at any price will last longer. Mail coupon or postal today. Just say, "Send Engine Book Free" and it will come by return mail, postpaid.

Address

What a Maynard Will Do

Pumping Water

The Maynard engine will pump water all day, saving hand pumping, making you independent of winds, saving you loads of time.

Grinding Feed

A Maynard 5 H.P. Engine will grind 150 bushels of corn a day, medium fineness. The same work done by hand would take three or four days and no one on the farm wants the job. With the Maynard, you save work, save time, save money, grinding your own grain, and many farmers make extra profits doing custom grinding for neighbors.

Shelling Corn

A Maynard will shell corn better and faster than 10 men, and do it cheaper. Shell corn for neighbors too and boost your profits.

Filling Silos

The Maynard will fill silos of any size, will run any make of cutter. You can figure on a smaller Maynard than any other engine because Maynard Engines are under-rated, not over-rated.

Sawing Wood

Many farmers make big money sawing wood with their Maynard Engine. Some farmers cut as high as 50 cords a day. Make firewood out of the timber on your own farm, then do it for neighbors.

Other Work

A Maynard will run the cream separator twice a day, run the churn whenever you need it, do the washing every week. It will run your workshop machinery, the grindstone, forge, drill, etc. It will operate any machine on the farm that requires power, at minimum expense.

Write Today

Send in the coupon or just a postal for the Maynard Engine Book—Free. It will help you decide on the right engine for you, at the right price.



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32x3 1/2	13.75	15.40	2.70	3.05
34x4	19.90	22.30	3.90	4.40
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36x4 1/2	28.70	32.15	5.00	5.65
37x5	35.55	39.80	5.95	6.70

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Firestone



Live Stock—Dairy

Rules for Germ-Killing

DISINFECTION means the destruction of disease germs.

Always disinfect according to the nature of the disease germs to be destroyed. Different diseases require different methods.

Fire is the best disinfectant of all. Give it preference wherever you can, such as burning infected straw, litter, and carcasses.

Direct sunlight is also good and will kill many disease germs if it shines directly on them. But for thorough work, especially inside work, it is unreliable.

Gases, such as formaldehyde and sulphur fumes, are effective for disinfecting small buildings that can be tightly sealed.

Liquid disinfectants are the most practical for general work, such as disinfecting farm buildings and killing parasites on animals.

Dipping and the use of spray pumps are the best means of applying liquid disinfectants.

Always be sure that a disinfecting solution is of the proper strength. This is especially important in treating live stock.

Always follow directions or get full instructions from reliable persons. Never guess at the strength to use.

Remember that sulphur fumes will corrode and tarnish bright metal. Bichloride of mercury (corrosive sublimate) also tarnishes metal.

A deodorant like weak carbolic acid is not always effective for disinfecting. You must destroy the cause of foul odors, not merely the odors or gases themselves.

Some Disinfectants are Healing

A bad smell is a good danger signal, but need not be dangerous in itself. The cause of the odor is the dangerous thing.

Commercial disinfectants that come in cans and can be diluted with water for immediate use are generally most convenient.

Some coal-tar disinfectants can be poured through waste pipes to disinfect the plumbing without harming the pipes or clogging them.

Sawdust moistened with coal-tar disinfectant is good for sweeping floors. It keeps the dust down and kills germs.

The active chemical agent in most coal-tar disinfectants is a substance known as cresol.

The standard commercial coal-tar dips cost about one cent a gallon.

Dips are of three main classes: coal tar, arsenic, and tobacco.

Sheep scab is a parasite that burrows in the skin of a sheep and causes an intense itching. Sheep pull out their wool in attempts to relieve the pain. Dip twice at intervals of eight days.

Scaly leg in poultry is caused by small parasites similar to those that cause scab and mange in the larger animals. One pint of coal-tar disinfectant, thickened with unsalted lard or petroleum jelly and applied as a salve, will cure it.

Kerosene sprayed on cattle will keep the flies off temporarily, but is not a disinfectant. It will take the hair off an animal if applied too thick, and it is also inflammable and costly.

Dips containing arsenic are popular for killing cattle ticks.

White arsenic, which is mostly used, is extremely poisonous. Do not breathe the dust, nor even let the powder touch your skin.

Whitewash is one of the best disinfectants for damp, dark places. It is also a good preservative.

The best way to apply whitewash is, first, to have it perfectly free from lumps, and then use a spray pump.

Thoroughness is important in all kinds of disinfecting work. There is no use to disinfect the walls of a barn unless you also disinfect the floors and mangers.

One good point about whitewash is that its color tells you when you have thoroughly covered a surface.

Some of the coal-tar disinfectants not only destroy germs but also kill lice, fleas, parasites and, in addition, heal cuts and wounds.

The best ways to disinfect yards, such as after a hog-cholera epidemic, are: First rake up all the trash and burn it. Then cover the yard three inches deep with straw and burn that. If you are not able to secure straw, sprinkling the ground with lime is a second choice. To

disinfect posts and fences, whitewash or paint them.

Disease germs shorten the average span of life by about two years. About 90 per cent of the common diseases are infectious, or "catching." Disinfection after disease is the first step for healthfulness, both for persons and live stock.

Buttermilk Starters O. K.

GOOD butter is not an accident. But to make it exactly the same all the time requires a good deal of apparatus, ice or cold running water, heat, and considerable "know-how." The flavor of butter depends largely on the way the cream is ripened. Ripening is simply the process of becoming sour and having the natural butter flavor.

The common method is simply setting the cream in the cellar, milk house, or on the back porch and letting it sour in "its own sweet way," if that is possible.

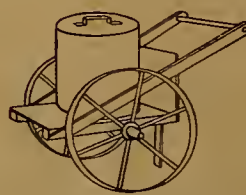
But here is a better way: Save a portion of buttermilk from the last churning and add to the first succeeding creaming. The amount of buttermilk should be about one tenth of the amount of cream.

Then add succeeding batches of cream, stirring the entire mixture well each time.

To hasten the ripening, raise the temperature; to retard it, put the cream in a cooler place. This method will give the succeeding churnings of butter the same flavor as that from which the buttermilk was secured.

Slop Cart Saves Time

By George Reppert



THE cart shown in the sketch is one that I made myself in four hours' time, and I find it so handy that I could not get along without one now.

I have a galvanized iron tank 22 inches high and 19 inches in diameter, with a lid fitted on. I put this tank on the cart and keep it near the house where all dish water, table scraps, apple and potato peelings, cabbage leaves, etc., can be thrown in during the day. In the evening I take it out to the hog pen and feed it to the hogs. I used to carry all this by hand every day, making as many as four and five trips, but now I can do it all in one.

A galvanized tank is better than a wood barrel, as it never dries out or leaks, and by its having a cover the flies cannot get in.

The tank can be taken off any time and the cart used for all kinds of chores about the farm. The wheels are from an old corn cultivator.

Bull Facts and Figures

S. G. SWOBODA of Langlade County, Wisconsin, is a dairy expert who has made a special study of bulls. This is what he says in a Wisconsin Bankers' Farm Bulletin about keeping, feeding, and handling them:

"A common or scrub sire cannot fail to produce a scrub cow. A 50-cent service fee usually results in a cow worth about \$50. A one to three dollar fee results in a cow worth about \$100.

"A good dairy sire will increase the production of his daughters about ten per cent above the production of their dams.

"The price of a good bull ranges from \$100 to \$300. This will buy a first-class animal with pedigree and good milk records on the female side."

Abundant exercise is a great help in preventing bulls from becoming ugly, and a small amount spent for making a paddock will add years to the length of time the bull may be kept in service.

The cost of feeding a bull a year will vary from \$50 to \$75, depending on the size and breed.

A good ration is two parts bran, two parts ground oats, two parts cornmeal, and one part oil meal.

All bulls should be dehorned and have a ring in the nose, so as to be led with a bull staff. Innumerable deaths and injuries have been the result of trusting "gentle bulls."

Story of a \$40 Cow

By Mrs. F. Gates

A COW which our family bought for \$40 three years ago produces \$177.60 worth of milk and milk products a year in addition to eight gallons of milk and two pounds of butter used a week by the family.

Twenty-one gallons of milk a week is given by the cow. Six gallons of cream is separated from the milk the family does not use. Eight pounds of butter and six gallons of buttermilk are churned every week from the cream. The butter

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Removes Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain; Stops Spavin Lameness. Allays pain. Does not blister, remove the hair or lay up the horse. \$2.00 a bottle, delivered. Book 1 K free.

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"Before the entire bottle was used the hock was clean as a hound's tooth"—writes W. T. Lewis of Denver, Colo., who used Save-The-Horse on Bog Spavin.

"I think Save-The-Horse the Greatest Remedy on market," writes John Montgomery, Paris, Ill. "The lameness was in shoulder. I used Save-The-Horse and jogged him right along. Now he is sound."

Book Free No blistering or loss of hair. Horse works winter or summer. A Signed Contract Bond to return money if remedy fails on Ringbone—Thorough—SPAVIN—or ANY Shoulder, Knee, Ankle, Hoof or Tendon Disease.

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25c. 50c. \$1.00

"One application gives Immediate Relief"

is sold in advance at 30 cents a pound. The butter milk is sold for 10 cents a gallon. I sell only six pounds of butter, but my total receipts for the week are \$2.40.

Three gallons of milk are saved, from



This cow gives 21 gallons of milk a week

which three quarts of cottage cheese are made every week. This is sold at 20 cents a quart. Two gallons of skim milk are saved every Thursday. It is sold for 10 cents a gallon. From the Friday evening and Saturday morning milkings I sell two gallons of milk with cream at 25 cents a gallon. This plan of saving certain milkings is because we live close to a city and make a trip there every Saturday. The high price for the products sold is due to the demand in the city.

Here are the total sales for the week:

6 pounds butter @ 30c.....	\$1.80
6 gallons buttermilk.....	.60
3 quarts cheese @ 20c.....	.60
2 gallons skim milk.....	.20
2 gallons fresh milk.....	.50

Total\$3.70

Milks 15 Cows an Hour

A TWO-HORSEPOWER engine or motor will operate a four-cow milking machine. During an experiment at the Kentucky Station the time required to milk a cow with a milking machine averaged 3.99 minutes. The experts point out that a machine maintains a regular speed, whereas a man milking by hand milks the first cows faster than those he milks last.

Dairying on \$700 Land

By D. S. Burch



RAISING all of the alfalfa and silage fed, all of the ration except the concentrates or dry feed; feeding to the hogs the skim milk left from the sale of cream, and keeping expenses at a minimum has brought success to Harry and George Gascho, brothers, who are producing certified milk on \$700-an-acre land in the suburbs of Dayton, Ohio.

Thirty-five acres of the home place of 100 acres were bought thirteen years ago, after having been leased three years. Later 35 acres more were bought, and several years later 30 acres more were purchased. While the farm is not quite all paid for, the profits from the dairy and the hogs will soon pay off the indebtedness.

"Certified milk is sometimes called the rich man's plaything," said Harry Gascho as I was looking over his equipment. "There are plenty of wealthy men with lots of money who produce it for about 25 cents a quart and are glad to get 15 cents for it. But that kind of farming doesn't suit me.

"They're in the business just for the fun of it. We have to make it pay; but just the same we live up to our slogan,

'We save the babies.' We're allowed to have up to 10,000 bacteria per cubic centimeter, but seldom exceed half that number. Sometimes it's less than a thousand.

"The hardest proposition of all is farming this high-priced land. We're right on the corporation line, and the land around us is valued at about \$700 per acre for subdivision into lots. Of course we didn't pay that for our place.

"A while ago it was costing us 4 cents a quart to bottle and deliver the milk. That was too much, and this was the reason: Our certified milk brings us 12 cents a quart and 7 cents a pint. Naturally most of our customers bought certified milk for their babies, but for general household use got ordinary market milk from other milkmen. Well, I figured that people didn't want to have two different wagons stopping at their houses, and it would not cost us any more to leave a couple of quarts than just a pint. So now we certify only about half of the milk. The rest, together with what we buy from neighbors, sells for a lower price, but the business is better balanced. Our sales have increased about 15 per cent, and expenses haven't gone up at all, because we sell it from the same wagons."

Bookkeeper is Valuable Employee

The farm has four stave silos, all of them 18x30 feet, for which the standard rated capacity is about 150 tons apiece. Each silo is made to hold over 200 tons. None of them have tops, so they are filled clear up. By the time the last one is full the others have settled several feet. They are filled up again, and the silage is piled up two or three feet above the top of the staves.

"We raise all of our alfalfa, silage, and rough feed," continued Mr. Gascho; "in fact, the whole ration, except such dry feed as cottonseed meal and commercial concentrates.

"We have leased three farms with a total acreage of 317 acres, but they are all kept separate in our accounts. We hire a bookkeeper at \$18 per week and board to do nothing but check up the drivers and keep the accounts. He is the most valuable employee we have.

"For instance, we have a five-year lease on one farm of 110 acres. I didn't expect it to make us any money the first year. The total expense of that piece of ground the first year for rent, labor, seed, and everything was \$3,040. But the books showed it returned us \$3,475, or a small profit of \$435."

The dairy herd on this farm comprises 85 milking cows, besides a Holstein bull, calves, and dry cows. It was an array you seldom see on a large dairy farm. The Holsteins numbered 34, Guernseys 6, Jerseys 4, Ayrshires 1, Herefords 1, and the rest were Shorthorns. Every cow must yield four gallons a day or give up its place to one that will.

Credit to His Mother

The barn was clean but not pretentious. Concrete floors and mangers, good ventilation, iron stanchions, and plenty of light were the principal things of interest. Six young men did the milking by hand. The milk is certified through the Montgomery County Medical Association, which tests the milk for bacteria at least once a week.

The farm also maintains 120 head of hogs, which consume the skim milk separated from the cream.

"What success we have had," said Harry Gascho as I was about to leave, "is due to the fact that we raise our own feed and keep down expenses. And don't forget to mention my mother: she's one of the partners in the business, and her work is important. She does the cooking for the crowd."



These men milk 85 cows twice a day. The white suits are really no more expensive than blue jeans, and look much neater

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This is the most amazing offer ever made in the history of the churn business. Nothing like it ever before—probably never again. We are sending out only 10,000 machines on this stupendous no-money-in-advance offer solely to prove that the **FAYWAY** is the greatest butter-maker ever produced. We cannot promise to hold this offer open after that number has been shipped. This is an open, straight and above-board proposition. It is a bona-fide offer—no strings to it whatever. Makes no difference who you are, where you live, how many cows you have, this offer is open to you. But you must act quickly.

Every milkster knows that it is harder to bring the butter at certain times than others—due to changing conditions of the cows and cream. The principle of the **FAYWAY** solves this problem. It is adjustable to all conditions that affect the churnability of the cream. Do you realize what this means to you?

ONLY \$1.00 IN 30 DAYS

Not a cent to pay for 30 days. And then only \$1.00. The balance you can pay in small monthly payments of only \$1.00. The payments will be earned for you in the extra butter profits the **FAYWAY** brings. Now don't for one minute think that the **FAYWAY** is anything at all like any churn you have ever seen. You can't judge it by ordinary churn standards nor by the price of ordinary churns. The **FAYWAY** works on an entirely different principle. It is the only butter-maker in the world which has solved the problem of correct butter-making. It keeps the fat globules intact. Ordinary churns break down the fat globules. Result—greasy, salty butter.

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Prove for yourself at our risk that you are losing money every day you use an ordinary churn. The **FAYWAY** costs more, but in extra butter profits, time and work saved it is worth a dozen ordinary churns. Mail coupon stating how many cows you milk and size of churn. We'll send it at once. Send no money. If after 30 days the **FAYWAY** hasn't proved our claims to your complete satisfaction, send it back at our expense. Mail coupon right NOW!

THE FAYWAY CO., 145 John St., Cincinnati, O.

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The **FAYWAY** is the only Farm Churn that can stand up under such a strong guarantee. Think of it! We guarantee this marvelous butter-maker for five years. This sensational guarantee is made direct to you by the manufacturer. Covers design, material, workmanship and results of the **FAYWAY** for five whole years.

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☐ 5 gallon size, \$11.50; \$1 in 30 days, bal. \$1 per month.

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When **DRIED BEET PULP** gets into the stomach of the animal, it "swells"—absorbs 5 to 6 times its own bulk of moisture. As a result of this swelling, the cow's entire meal does not pack in her stomach in a hard indigestible mass. The gastric juices readily penetrate, aiding digestion and enabling her to get the full benefit of all she eats.

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DRIED BEET PULP adds to the PALATABILITY of any ration. Cows like its sweet, root-like flavor. It imparts to the whole ration a tempting taste that encourages better mastication and stimulates an abundant flow of digestive juices. **DRIED BEET PULP** is also cooling and laxative. Cows fed on it rarely have udder troubles and the bowels are always gently relaxed.

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The new 1915 crop is now ready. If your dealer does not have it, he can get it for you. The demand for **DRIED BEET PULP** usually exceeds the supply. That is the best proof of its value. Get your share of this **WONDER FEED** this year—place your order at once. Ask for Larrowe's—and GET IT. See that our guarantee tag is on every bag.

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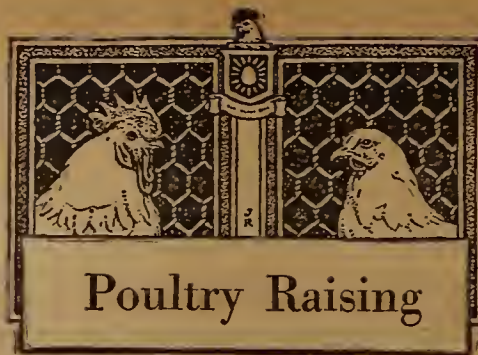
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Poultry Raising

My Money from Hens

By Clara Kennard

I STARTED keeping poultry two years ago, chiefly because I had plenty of room to keep them and some time to care for them. The profit I thought a well-managed flock of hens would pay was also no small inducement.

I had a fairly large poultry house that had not been used for several years, therefore no investment was required save for the fowls themselves. These were 50 hens of the single-comb White Leghorn variety and cost 75 cents each, or \$37.50. I concluded that the largest profit could be made from eggs, and did not raise any chicks, depending on buying pullets every fall instead.

I gave my hens good care. They were fed a grain ration composed of one fourth corn, one fourth buckwheat, and one half wheat. They have free range at all times. All my revenue is derived from eggs, and during the first year all my eggs were sold at the local market price. My 50 hens laid just 6,000 eggs during the first year. These were sold at an average price of 24 cents per dozen. My expenses, for feeding the hens and miscellaneous, were \$60.45. Adding the cost of the hens to this, I had invested \$97.95 in my flock during the first year. My receipts from eggs were \$120, and I sold the 50 hens at the end of the year, receiving \$24 for them. Total receipts, \$144. Total expenses, \$97.95. Profit, \$45.95. This was not so bad, but I determined to do still better the next year.

At the beginning of the second year of my poultry venture I bought 100 pullets, again of the single-comb White Leghorn variety. I was careful to buy pullets coming from a strain of fowls that were known to be good layers. After a little trouble I finally found the ones I wanted. I paid \$80, or more than my first year's profit, for the hundred.

I made a good investment. In one year the 100 pullets laid 13,120 eggs, or an average of over 130 each. I was also able to increase the price received for my eggs in an unusual way. A hotel man from a near-by city passing my place in an auto one day saw my flock of attractive, snow-white hens and ordered some eggs shipped to him when strictly fresh. I received about 10 cents more per dozen for these than the local market price. This raised the average price received for my eggs to 28 cents per dozen. My total receipts from eggs for the year were \$306.13, and at the end of the year I again sold my hens, receiving \$50 for them. My total expenses for the year, including the cost of the 100 pullets, were \$192, leaving me a net profit of \$114.13.

I have put my poultry business on a well-paying basis in two years' time, and I am starting my third year with a flock of 125 pullets that promise to do as well as my former ones.

My Double-Decker House

By P. F. Woodworth

HOW can I best house my hens and secure a maximum of profit with a minimum of labor? I solved this problem to my own satisfaction by keeping all my flock under one roof, but divided into pens of not over 25 hens in a pen.

"How can you keep diseases from spreading from pen to pen?" will be asked.

I am ready to say that anyone who has reached a stage in poultry-keeping that he can safely consider using a poultry house over 50 feet long will no longer fear poultry diseases.

Here is the way my houses are built: At least two feet from the ground foundation are used posts on which to set the house sills. The space under the house is tightly boarded on three sides, and the front facing the south is covered with wire netting fastened to a movable frame. The runway under the house is kept dry by making drain or stone-filled ditch around the house wherever it is needed.

A small trap door through the tight board floor connects each pen with the ground-floor pen, thus doubling the floor space protected from the weather by one roof.

This ground-floor space is filled in with several inches of fresh sand twice a year. I use a long-handled wooden scraper to clean off the surface of the sand when it becomes soiled, but the droppings become so pulverized and absorbed by the

dry sand and soil as to be practically odorless if the cleaning twice a year is thoroughly done.

Though the laying hen is noted for her loud voice, her actions while living in this house speak much louder, for you will find her on the ground floor when the sun is hot; and when the thermometer is hovering around zero she is contentedly dusting herself in the dry sand.

Thus the problem of combating vermin is reduced to the minimum, for the hens are in a position to apply the proverbial "ounce of prevention" for themselves. In fact, a yard is hardly necessary, as they seldom use it excepting in ideal weather.

While cleaning the house proper, all the stock is driven below, where they remain unmolested until the job is done.

By installing a carrier running through the pens with the overhead trolley system, one man is able to do the work that would require three men if the same number of hens were scattered over the landscape in colony houses.

Aside from the extra labor involved, the colony house is a shock to the artistic sensibilities of the public. It is also an open challenge to the hen thieves.

A continuous house having the double floors, as described above, will keep just double the number of birds at practically the same building expense when compared with any other house of the same dimensions.

Had Him Guessing



"Since my wife's got an incubator, I can't decide whether I'm a grass widower or an assistant engineer."

Now It's Sterilized Eggs

A STERILIZED egg company has been formed at Alexandria, Minnesota, for treating eggs so they will keep for a so-called indefinite period. The machine which does the work destroys the embryo of the egg, making it infertile, sterilizes the shell, and then hermetically seals it to prevent shrinkage by evaporation, and also to keep germs from reaching the contents.

The machine has a capacity of twelve thousand dozen a day. Results in California are said to have been thoroughly satisfactory. A government expert is now investigating the matter to learn whether the new method is likely to affect seriously the egg trade.

Separate Hens and Pullets

By T. Z. Richey

IN WORKING for winter egg production I always keep my old hens and pullets in separate flocks. When kept together the old hens will fight and worry the pullets, "keeping them in a constant state of fear and nervous excitement that is detrimental to the best egg yield."

Besides this, no system of feeding is suitable for both hens and pullets. My experience is that four pullets require as much food as five hens. The reason for this is plain: a pullet is not fully developed, and the food eaten must not only make eggs but bone and flesh as well. The food fed to pullets should also be richer in protein. When kept in the same flock, then, it is easy to see that if the pullets receive enough food to induce a good egg yield the hens will likely become overly fat. On the other hand, if the hens are properly fed the pullets will more than likely be underfed.

In feeding pullets I give them all they will eat. A dry mash is kept before them all the time. Each 100 pounds of this mash contains 20 pounds of beef scrap. This is double the quantity of scrap supplied the old hens. There is little danger of overfeeding pullets, especially if they are made to exercise in deep litter for part of their whole grain feed.

BLACK SNAKES swallow eggs, and may occasionally kill a chicken; but they are the greatest enemy of the copperhead and the rattlesnake.

A DRAFT from the door, window, or any aperture starts you to sneezing. Your hens are in danger of colds and roup from the same cause. Make the back and ends of the poultry house air-tight to prevent drafts.

THE eggs laid by a flock of 100 hens in one year contain close to 150 pounds of lime. If the hens lay ten or twelve dozen eggs each, the shells of their eggs will weigh over two pounds per hen.

MORAL: Keep the shell hopper well filled.

SKUNK We pay top prices for Skunk, Mink, Muskrat, and all raw Furs. Price list free. **M. J. JEWETT & SONS, REDWOOD, N. Y. DEPT. 7.**

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Crops and Soils

Strenuous Weed-Killing

By M. E. Woodbury

IF YOU have a field, or part of a field, infested with mustard, quack grass, Canada thistle, or morning glory, the best way to destroy these pests is to fallow the plot for a full year. Of course you will lose one crop, but this is better than to lose and keep on losing year after year. One of the first things to forget is that you can kill noxious weeds with a spring-tooth or disk harrow. There are but three effective tools for this game.

Most important is the common hoe. Second is the old-fashioned two-horse cultivator, and in fallowing we fasten the gangs together so as to cut about 24 to 30 inches wide. The third tool is the plow, which is useful to get the land in condition in the spring, but afterward it is too slow.

When the land has been spring-plowed, cultivate north and south, then in two weeks cultivate east and west. Then keep on alternating every two weeks all summer, first cultivating north and south and then east and west.

Work as late through the fall and into the winter as you can. Go over the land every few weeks with a hoe to kill all weeds the cultivator has missed, and should there be any in the fence corners, ditches, or along the fence rows, destroy them with the hoe.

The second year plant the land to corn. Cultivate thoroughly and follow with a hoe every two weeks. When the corn is too high to cultivate, keep on with the hoe and kill every weed that has grown. The third year plant the land to anything you choose. But you must still use the hoe and look the land over occasionally. Some weed seeds remain in the ground several years and when a favorable time comes they sprout and grow.

From my experience this is the only effective plan of weed-killing. We cannot kill noxious weeds without sweat of the brow. Most of the short-cut schemes do not work out well in actual practice.

Go Find the Aphis

"GO TO the ant, thou sluggard." So said Solomon, and it is probably more true to the farmer than anyone else, and contains more truth than even the wisest man in the world knew in Solomon's day. "Consider her ways, and be wise" to the depredations of all the plant-louse tribe. When you have to go to the cornfield to consider the ways of the ant, be wise to the fact that you have the corn-root louse to contend with.

The ants are not interested in the corn at all, but in the root lice which they use for certain purposes of their own, just as you use cows. They make the aphides give them honey-dew instead of milk, and they care for the aphides eggs during the winter. If you don't want to prove yourself a sluggard, give that land a change of crops.

The ants are counting on your stupidity—betting that if they keep the eggs over winter you'll furnish corn for the plant louse to suck the juice from next summer. Fool them, or you prove yourself unwise, if not exactly a sluggard.

By going to the ant you may be wise also as to many other kinds of aphides or plant lice.

If you can't make the change in crops, stir the ground frequently and deeply between spring and the planting of the corn, and cultivate deeply the first time through. This will disturb the plant-

louse nests and bother the ants—and that is about all you can do for infested corn or corn ground except to fertilize heavily.

Other kinds of aphids may be controlled by sprays—those kinds which work above ground.

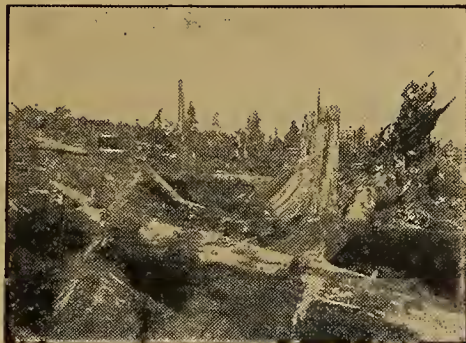
The root aphid of the apple and some other trees is one of the hardest pests to control. Like the corn-root louse it is below ground, and it can't be eradicated by rotation of crops. Fighting the ants does no good. Be thankful for the visibility and activity of the ants—they act as signal-service men, telling us where the plant lice or aphides are to be found.

WAR conditions have not only interfered with the potash supply, but nitrate of soda is also climbing in price as a result of its use in the manufacture of explosives.

THE Washington Experiment Station at Pullman, Washington, has issued an excellent bulletin on the control of tumbling mustard. It tells how to keep the farm free from mustard by the right kind of cultivation, and also how to harvest grain badly infested with mustard.

But It's Slow Work

THESE two pictures were furnished by Aubrey Fullerton of western Canada. They show that giants are still with us, though in this case they are huge stumps. These giants must be conquered in fact, or the real value of the land cannot be realized.



In the center of the lower picture you can see the gin pole used for piling up the waste preparatory to burning it. This method, though laborious, is about as effective as any, where the work of clearing must be done with limited capital.



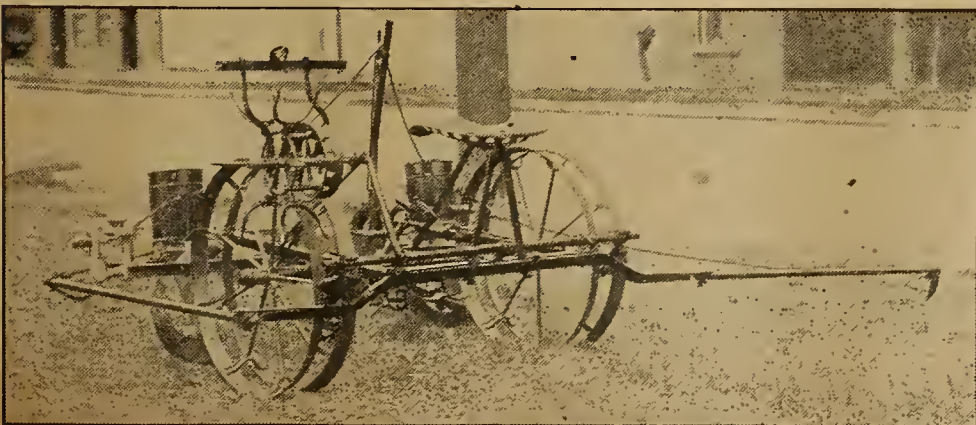
Brown Seeds are Bad

WATCH out for poor germination quality in crimson-clover seed on the market. Government advices say that much poor crimson-clover seed was imported last spring. A much greater quantity than usual was imported—some twelve million pounds, or about double the importation of 1913.

Inspection of several lots of this seed has shown a germination of only 29 to 62 per cent. All lots containing brownish or brown seeds are of doubtful germinating quality and, when used, the rate of seeding should be adjusted accordingly.

ONE of the easiest ways to get a start with sweet clover is to cut any found growing by the roadside, the railroad right of way, or in cemeteries, and haul and spread it directly on your pastures, impoverished places in meadows or cultivated fields. Cut and haul the sweet clover when it is a little damp, to prevent shattering of the seed.

Folding Markers on Corn Planters



The markers on this corn planter work automatically. When you turn the planter around, the one that's out folds in and the other folds out

ARE YOU READY FOR WINTER?

Now Is the Time

to go after those minor building jobs—hog houses, poultry houses, sheds, feed racks, gates, fences, etc.,—before rough weather comes.

Put your farm in shape for the stormy season.

Protect your stock from wet and cold.

A building dollar spent in time is sure to save you more than nine!

And when you build, build for SERVICE, build with



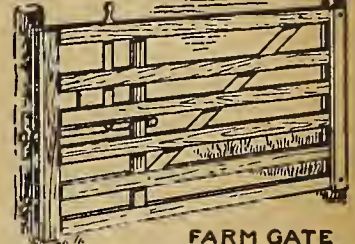
HOGHOUSE



HENHOUSE



FEED RACK



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Southern Yellow Pine

"The Wood of Service"

the strongest, toughest, stiffest, most durable and most economical wood suited to general farm building and repairs, indoors and out. There's a lifetime of service in it.

Get Our Free Building Plans

We have architects' plans, drawn to scale, with lumber bills and estimates complete, for houses, barns, bins, cribs, and many other farm structures, large and small. They are practical, valuable farm helps, and they are yours FREE for the asking. From any of them your local Southern Yellow Pine lumber dealer can tell you to a dime what it will cost you for any structure, from a hen's nest to an 8-room home. Fill out and mail the coupon today.

Southern Pine Association

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NEW ORLEANS, LA.

SOUTHERN PINE ASSOCIATION,
665R Inter-State Bank Bldg., New Orleans, La.

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Name
Town
R.F.D.
State

Your Limestone Ledge Is A Gold Mine!

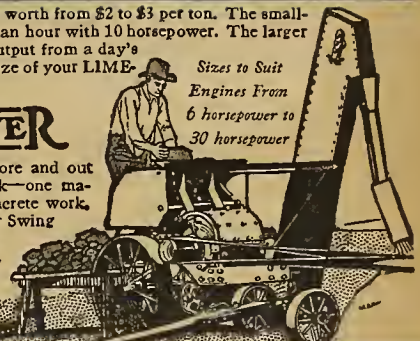
(19)

Your limestone ledge, when pulverized, is worth from \$2 to \$3 per ton. The smallest Jeffrey LIMEPULVER will pulverize 1 ton an hour with 10 horsepower. The larger sizes will pulverize 3 tons or more per hour. The output from a day's work being worth from \$20 to \$90 depending upon the size of your LIMEPULVER and the horsepower of your engine.

The Jeffrey LIMEPULVER

You can feed this machine big rock weighing 60 pounds or more and out pours the limestone finely ground—only one handling of the rock—one machine—one operation. If crushed rock is wanted for road or concrete work, simply push a lever. Crushes to any size. The patented Jeffrey Swing Hammers pulverize rock without grinding. Lasts a lifetime. Sold on a guarantee. Write for catalog and our Trial Offer.

THE JEFFREY MFG. CO.
272 First Ave., Columbus, O.



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64⁷⁵ AND UP That's the price of Galloway spreaders.

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can be bent, twisted or struck with lightning, and galvanizing will not crack or flake. Bend it or hammer it, you can't loosen or scale galvanizing. This means an everlasting galvanized roof.

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GARAGE \$69.50

Lowest price ever made on Ready-Made, Fire-Proof Steel Garages. Set up any place. A postal will bring you our illustrated 64-page book.

Freight Prepaid Lowest Factory Prices. Greatest

roofing proposition ever made. We sell direct to you and save you all in-between dealers' profits. We cannot quote prices here but if you will send for our

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Overland
TRADE MARK

HERE is another Overland model. A brand new car at a brand new price. Many people prefer a car that is smaller, lighter and more economical to run but with the advantages of the larger and higher priced cars.

Model 75 is a comfortable, family car with virtually all the advantages of the very large cars at a price which is well within your reach.

The price is only \$615!

It has a powerful motor; electric starting and lighting system; high tension magneto ignition; 104-inch wheelbase; cantilever springs; four-inch tires; demountable rims; streamline body design.

This season our factory capacity has been increased to 600 cars a day.

This, in itself, explains our ability to give so much car for so little money.

This newest Overland is a beauty.

The body is the latest full streamline design with a one-piece cowl.

It is handsomely finished in solid black with bright nickel and polished aluminum fittings.

Five adults can ride comfortably.

While the car is roomy, it is light in weight, 2160 pounds.

It has demountable rims with one extra.

The tires are four inch all around because we believe in the advantage of large tires.

They insure greater mileage and comfort than can be obtained from the smaller size used on other cars of similar specifications.

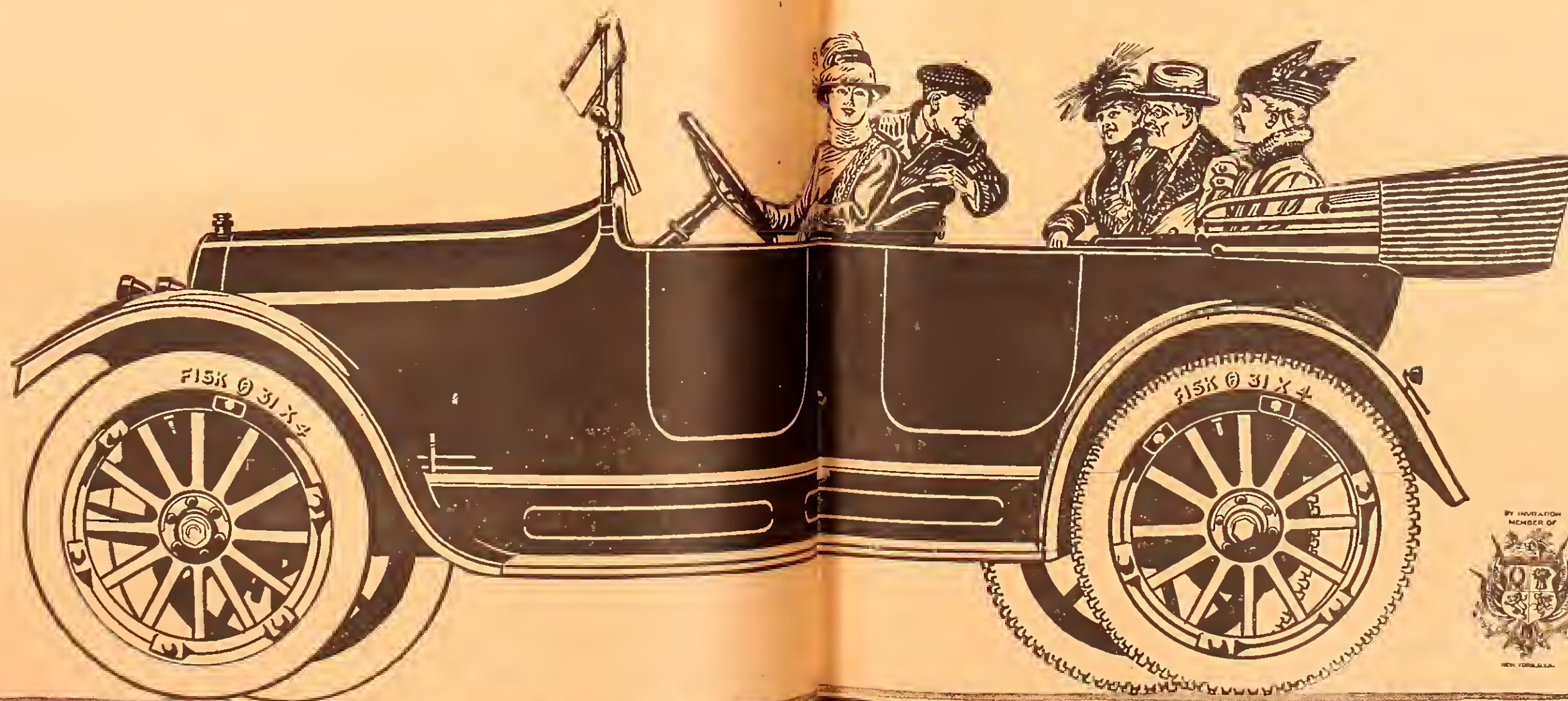
The motor is four-cylinder, long stroke bloc type, having a $3\frac{1}{8}$ -inch bore and 5-inch stroke. Horsepower is 20-25. It is of the most modern design.

It has high tension magneto ignition. This is the kind used on the most expensive cars.

The electric starting and lighting system is one of the most efficient on the market. It is of the two-unit type.

\$615
Model 75 - f.o.b. Toledo
Roadster \$595

**With Electric Starter
and Electric Lights**
Four Inch Tires



Overland
TRADE MARK

The large electric headlights have dimmers.

This car is very easy to handle. It responds quickly. Anyone in the family can drive it.

The electric switches are conveniently located on the steering column. This is the same arrangement used on the highest priced cars.

It has the easy working Overland clutch which any woman can operate. The pedals are adjustable for reach. The steering wheel is large and turns easily.

The brakes are large and powerful.

The rear springs are the famous cantilever type. These are probably the easiest riding and most shock absorbing springs ever designed. With these springs riding comfort is insured.

The seats are roomy and comfortable for the soft cushions are built over deep coiled springs.

It has a mohair one-man top.

In short, there is everything that makes this car up-to-date and comparable with many cars costing considerably more money.

You will be delighted when you see it. And when you ride in it you'll know instantly that this is your ideal of a modern automobile at your idea of a moderate price.

Other Overland models are—Model 83 five passenger touring car \$750; the famous Overland Six seven passenger touring car \$1145. All prices being f. o. b. Toledo.

See the Overland dealer in your town.

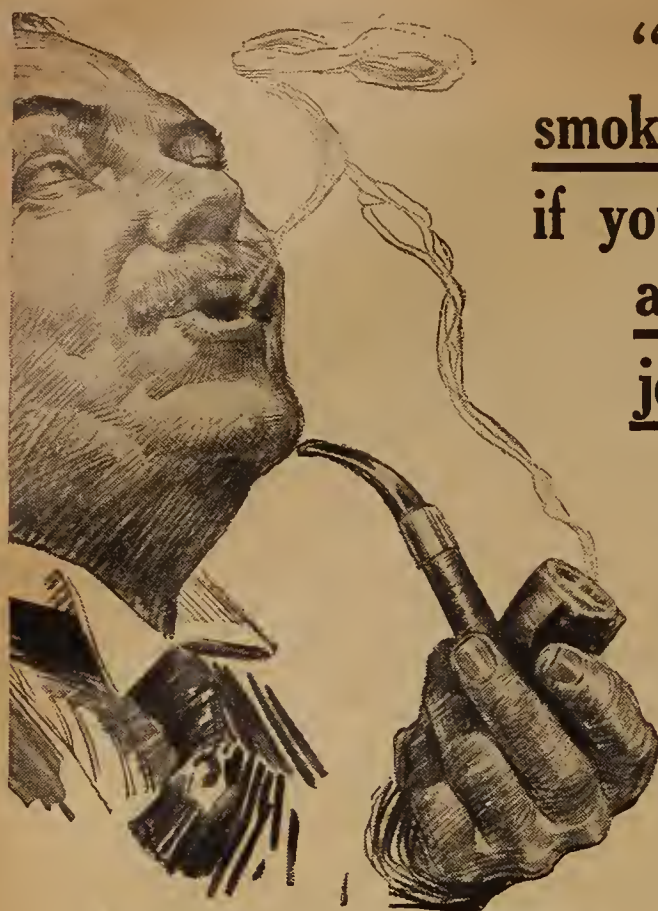
Specifications of Model 75

Pure streamline body five passenger touring car	31 x 4 inch tires
Finished in black with nickel and polished aluminum fittings	Non-skids on rear
Wheelbase 104 inches	Left hand drive; center control
High-tension magneto ignition	Floating type rear axle
20-25 horsepower motor; cylinders cast en bloc	Cantilever springs on rear
Electric starting and lighting	Built-in, rain-vision, ventilating type windshield
Headlight dimmers	One-man top
Electric switches on steering column	Magnetic speedometer
	Electric horn
	Full set of tools

Catalogs on request. Please address Department 575

The Willys-Overland Company
Toledo, Ohio

"Made in U. S. A."



"Say, you ring-one up with some P. A., too!"

Copyright 1915
by R. J. Reynolds
Tobacco Co.

**"Well,
smoke it yourself
if you want that
all-fired
joy-feeling!"**

Prince Albert is the cross-lots cut to tobacco satisfaction. It hands out more genuine happiness each puff, and fresher fragrance each puff than you ever did dream would fall to your lot. The patented process fixes that—and

cuts out bite and parch! From dawn's early light until turn-in-time you can smoke away, *man-like*, because there isn't any unpleasant comeback in

PRINCE ALBERT

the national joy smoke

Don't linger about what you're going to do about this pipe-packing question. Because, men, you're losing fun and contentment.

You buy some Prince Albert in the tippy red bag at a nickel or get a tidy red tin for a dime; or pick the handsome pound and half-pound tin humidors. But of all the P. A. packages, you'll find that classy crystal-glass pound humidor what you *need most!* The sponge-moistener top keeps the friendly tobacco in such bang-up trim!

R. J. REYNOLDS TOBACCO COMPANY
Winston-Salem, N. C.



Mighty Monarch Stump Pullers Guaranteed 5 Yrs.

YOU WANT the stump puller with the most power and speed—made of steel—having double and triple power equipment—simple and easy to operate—at a price any farmer can afford. In fact, you want a

ZIMMERMAN MIGHTY MONARCH STEEL STUMP PULLER

Our free complete catalog describes latest stump-clearing method and our new improved stump puller. Write for it today. Zimmerman Steel Co., Dept. FF Bettendorf, Iowa



98 cents 5 YEAR GUARANTEE Railroad Style

To advertise our business, we will send this elegant R. R. style watch by mail for **ONLY 98 CENTS**. Gentlemen's size, full nickel silver plated case, locomotive on dial, lever escapement, stem wind and stem set, a perfect timekeeper and fully guaranteed for 5 years. Send this advertisement to us with **98 CENTS** and watch will be sent by mail post paid. Satisfaction guaranteed or money refunded. Send 98 cents today. Address

R. E. CHALMERS & CO., 538 So. Dearborn St., Chicago



FREE

Most beautiful carriage book printed—contains more styles than you will find in 20 big stores. Yet a postal brings it free. Most astonishing buggy offer. I tell you how after 15 years' leadership in buggy building, I can now make you my starting offer on

5% PROFIT OFFER

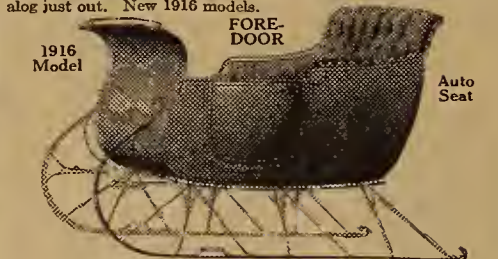
You can buy a genuine Split Hickory—niftiest, strongest, most stylish buggy—as low as \$39.25. Every job guaranteed—30 days' free road test—freight paid both ways. Write for catalog; also catalogs of harness and farm wagons. H. C. Phelps, Pres. THE OHIO CARRIAGE MFG. CO., Columbus, O., Station 42

SPLIT HICKORY \$39.25

Farm and Fireside advertisers will give you a square deal. We guarantee it.

CUTTERS AT WHOLESALE PRICES

From Factory Direct to You
Save from \$10 to \$20 by buying direct from us. Our 1916 Catalog just out. New 1916 models.



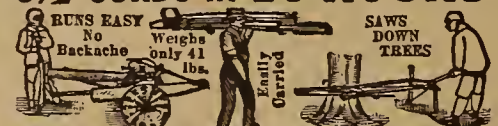
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Grind corn and cobs, feed, table meal and alfalfa. On the market 49 years. Hand and power. 23 styles. \$3.80 to \$40. **FREE TRIAL.** Write for catalog and farm machinery bargain book.

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9 1/2 CORDS IN 10 HOURS



BY ONE MAN. It's KING OF THE WOODS. Saves money and backache. Send for **FREE** catalog No. B12 showing low price and LATEST IMPROVEMENTS. First order gets agency. Folding Sawing Mach. Co., 161 W. Harrison St., Chicago, Ill.

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Big Money in Trapping skunk, coon, mink, muskrat, fox, etc. You can trap furs—we teach you how. Funsten Animal Bait guaranteed to increase your catch. \$1.00 a can postpaid. The Funsten Perfect Smoker "smokes 'em out." Price \$1.50; parcel post 30 cents extra. Both guaranteed satisfactory or money back. Traps at factory prices. 3 books in one (trapper's guide—Tells bow, when, where to trap, how to remove, prepare and ship skins. Will send you fur market reports, shipping tags and big book **FREE**—Write today. We tan hides and furs for coats, robes and garments.

Funsten Bros. & Co., 464 Funsten Bldg., ST. LOUIS, MO.



What Others Do

Fifteen Coons in One Catch

By J. R. Bowling

FOR the coon, set your trap out in the water far enough for the water to cover it, then cut a bush and lay in the water beyond your trap, also one on the bank, bringing the two near enough together to leave an open space about eight inches wide. In this set your trap; then lay a small stick across the opening six inches from your trap, so that when the coon passes through the opening he will step over the stick into the trap.

I often put brush clear across a shallow stream, leaving an opening in the center of the stream. Place stepping stick the same as those near the bank, and you will catch nearly every one that passes along that stream, as the brush will force him to go over your trap, as he will never go through the brush if he can find an opening.

My best catch this way was fifteen coons out of twenty-two traps in one night. Fresh eggs are good coon bait, also honey and fish.

Good Fur Market Promised

THE coming season should be a good one for trappers. The European supply will be small because of war and blockaded ports. Furs are decidedly in fashion for coats, hats, and trimmings for dresses and even shoes.

Various fur substitutes, such as cloth that closely resembles certain furs, relieve the situation somewhat, but nevertheless the fur market has never been in a more vigorous condition.

How "Our Tractor" Works

By Boyd Stickley

WE TOOK a 1907 model, two-cylinder, chain-drive automobile worth not more than a hundred dollars and transformed it into a tractor at an expense of eight dollars, our time in designing and assembling not being included.

We first proceeded to make the rear axle stationary on top of the automobile frame, after it had been shortened, and



Plowing under old raspberry beds is no pleasure for horses, but our tractor never minded it at all. We neither rolled down nor removed the briars. The tractor wheels did all the "rolling down" that was necessary. On stable I have used a gang plow, but had some difficulty with hidden obstacles. With care we passed them, doing no damage to anyone or anything.

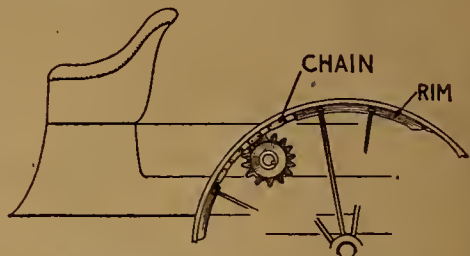
used the same roller end bearing. Two binder wheels were secured for a dollar each. The axles came the proper length. Two sprockets and two chains were also obtained at the junk shop for a dollar each.



With this tractor we harvested 20 acres of grain for ourselves and four for a neighbor who had tried to persuade us not to make over the car into a tractor. We harvested 14 acres on one gallon of cylinder oil, costing 35 cents, and 11 gallons of gasoline, costing 11 cents a gallon. This amount of gasoline included the work done in pulling the harrow to and from the field, four miles all told. A cradle was carried in order to keep the ends round and to mow around rocks and trees.

Our greatest trouble, or problem, was to reduce the speed in order to have sufficient power when in high gear. This was accomplished by the use of a 15-tooth sprocket which meshed into the proper size auto roller drive chain. This chain was fastened on the inside of the wheel's rim by a wood rim on each side. This wood rim was held in place by hook-head bolts fastened to the spokes of the wheel. These bolts were about four inches apart. This device held the chain tightly in place. The front wheels had wooden tires or rims to replace the pneumatics previously used on the car. The result—our tractor—was very convenient and light for laying off corn land, harrowing, mowing, and raking hay.

The pictures shown here were taken on our place this year, and give a pretty complete idea as to how we make use of this tractor. We find that it cuts in two the time needed for the various operations.



How the chains and sprockets were arranged



The tractor could pull the tedder as well as the mower, so two operations were performed at once. Slow to very fast speeds were used. When the weather was hot, or when work was pressing, we used the lighting system and worked at night. Corners were turned round.

Anti-Skid Chains

"CHAINS and other skid devices should be used only when actually needed," says a prominent automobile expert. "The continued use of such devices wears and cuts the tires."

In other words, take off the anti-skid chains when you no longer need them. But remember also that human life is more valuable than tires.

HON. C. O. RAINE, master of the Missouri State Grange, has proposed as a new slogan, "A shed for every farm and all farm machinery under the shed."

It's Wisdom, Too

AN EXCHANGE hands out the following wisdom: "Early to bed and early to rise; cut the weeds and swat the flies; mind your own business and tell no lies; don't get gay or deceive your wives; pay your debts, use enterprise, and buy from the firms that advertise."

Cheapening the Lime Supply

TWENTY-FIVE MILLION quarts—eight hundred thousand bushels—of corn for seed-corn use for one corn-belt State sounds big. But that is the approximate quantity that was saved this fall for the 1916 seeding in Indiana. When we contemplate this enormous aggregate we can better understand how essential is the proper selection, curing, and storing of the seed-corn supply in every locality where much corn is grown.

Simple Carbon Removal

By W. V. Relma

WHEN a gas engine knocks with a peculiar hollow sound, or has a tendency to run after the ignition is off, it indicates a large carbon deposit. To operate the engine in this condition is injurious and at the same time a waste of fuel.

There are various methods of removing carbon, but the most common is the injection of kerosene into the combustion chamber through the spark plug or the pet-cock opening while the engine is still warm after a run. Allow this to remain overnight, and the carbon will usually soften enough to be blown out the exhaust pipe when the engine is next operated.

It is best to drain this oil before attempting to start in the morning. If draining is impossible because no drain-cock is fitted, a piece of hose on the end of the syringe will usually enable the operator to remove the kerosene.



Farm Notes

In Terms of Horsepower

IN WESTERN and Southern States, horses can be kept for a year as low as \$50. In States where feed is high, the cost may reach \$120, and for the entire United States is \$82.50. The figures preceding take into account, shoeing, veterinary charges, housing, and feed.

THE average horse develops seven tenths of a horsepower.

THE weight of the team ought to be eight times the draft of the plow, under average conditions.

A HORSE can pull with a force equal to about one eighth of its weight continuously for eight hours at a speed of two and a half miles an hour.

THE United States has one fourth of all the horses in the world. The world's supply before the war began was 100,000,000.

A FURROW fourteen inches wide and five inches deep requires a draft of 310 pounds in ordinary loam soil. A furrow eight inches deep requires 450 pounds draft.

Fence-Building Pointers

THE proper way to make a woven-wire or barbed-wire fence is to have all the side strain come on the anchor posts. Do not staple the line posts so tightly that the wire cannot slide under the staples. The greatest distance between strain posts should be not more than 640 feet.

Cylinder Oil Substitutes

By H. A. Henry

THE matter of always having a good supply of cylinder oil is important. It is safest to use the grade and amount of oil recommended by the manufacturer of the motor, but sometimes circumstances prevent this. If you are caught out in the country with an insufficient supply of oil, try to get cream-separator oil.

This is likely to be a good oil and can usually be obtained from a near-by farmhouse. Or in a still greater emergency even castor oil would be better than none. Best of all, however, is to have a small emergency can of the proper grade of oil in the tool box. This can then be used as desired and will enable the motorist to get to a supply point.

Besides, this oil is always available for use upon other parts of the car which need extra lubrication, such as a brake band which sticks, or a squeaky spring, or any of the numerous parts of a car which can develop an annoying or injurious squeak.

Starting a Cold Motor

By W. V. Relma

WHEN a gas engine is cold it will not start easily as a rule. The first preparatory step

for cold-weather starting is to see that the ignition system is in good order—no broken wires or bad contact points. If the car has dry cells or a storage battery, test them to see that they are delivering a good current. Next examine the spark plugs, and if there is a magneto look that over too. If all of these features are in good order, the ordinary priming effect of the carburetor will be sufficient in moderately-cool weather. The next step for colder weather is to have some high-test gasoline in a small can for priming purposes, to be used in the pet cocks; or a dash primer can be installed at a small expense, as shown by the illustration.

This is a very effective device, and a few drops of high-test gas will usually start the motor.

Very cold weather or extreme conditions demand even more effective methods. For example, the carburetor may be warmed by having cloths or waste, dipped in hot water and wrung out, wrapped around it; or hot water may be poured into the radiator, or a lamp may be kept near the radiator during the night.

Sometimes a handkerchief saturated with gasoline and held over the carburetor inlet is effective.

Regardless of whether a car has a self-starter or not, it is best to use methods which will make the motor start easily, so that the batteries will not be needlessly weakened.

Willow-Wand Shortage

WILLOW WANDS for the making of furniture and baskets have in the past been imported in the main from England, France, Holland, and Germany. The war has cut off many of these sources, and there is a scarcity. Americans who have been planting these willows in past years will do well to harvest them carefully and study price lists before selling.

THE world's commerce for the year ended June 30, 1915, shows that the United States for the first time in its history leads the world as an exporting nation. Great Britain has usually held first place.

IF ANY inventor can invent a substance which makes as good harness as leather, there is a fortune awaiting him. It must have the same strength, elasticity, durability, and those other good qualities which have made leather the only good substance for harness in spite of all imitations and substitutes.

Unruly Gas Engine

By W. V. Relma

A CERTAIN stationary gas engine had a way of running very nicely for a few days and then suddenly becoming unruly. On Monday it might be running all right, and on Tuesday might not be working well at all. The various usual troubles were checked up.

The spark plug was clean, the battery connections were examined, and the compression was tested. It still continued to operate in this manner. Finally it was noticed that, like rheumatism, the trouble occurred on rainy days. This led to the suspicion that a short circuit caused by dampness was affecting the batteries.

As soon as this suspicion was aroused, the battery box, which had been fastened to the wall, was removed and placed in another position. The trouble immediately ceased. The original positions of the batteries and engine are shown in the sketch.

THE annual machinery bill loss sustained by farmers in Nebraska alone on account of lack of proper housing of machinery is reckoned by engineering experts to be two and one-half million dollars.

Several Lost People

J. W. HARRIS of Trumann, Arkansas, has been missing since July 20th of this year. Age, forty-five years; weight, 170 pounds; height, 5 feet 11 inches; blue eyes; hair streaked with gray at temples. Carpenter by trade; formerly railroad foreman. Information concerning him will be deeply appreciated by his wife.

JAMES L. KIELY left his home in Brooklyn July 5, 1881, at the age of fifteen years. He had brown hair, gray eyes, and was rather tall. A month later he wrote that he was working on a farm near Rock Island, Illinois. Information regarding him will be greatly appreciated by his step-brothers, sisters, and widowed mother.

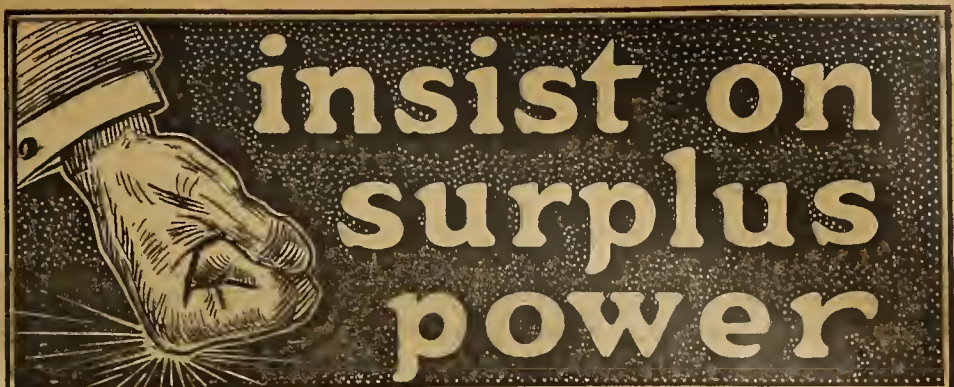
JAMES R. HATFIELD, age, thirty-three years; height, 5 feet 7 inches; weight, 130 pounds; light hair and blue eyes and light complexion, is a lost person. He left his home in West Virginia October 12, 1914. He is a miner by occupation. Information of him will be deeply appreciated by his wife and children.

CHARLES ANDREWS, who later changed his name to Charles Andrews Crawford, is a lost son to his mother Hannah Andrews, who is now eighty-seven years old. He is sixty years old, six feet tall, and has black hair and eyes. He was last heard from at Moss Point, Jackson County, Mississippi, about thirty-five years ago.

MRS. WM. ADKINS, formerly Anna Miller of Boone County, West Virginia, and who later married again, is a lost mother to her son Bruce, still living in West Virginia. Her second husband's name is not known, but this is her description: Age forty-five years, weight about 140 pounds, medium height, light hair, dark eyes. She is thought to be living in Tennessee.

One Found

GEORGE COATES, who was advertised for a few weeks ago in this column, has been found in Alabama. He has lately been united with his daughter, who was a baby when he last saw her in 1886.



University Experts rate Economy Gasoline Engines with 13 to 31% Overload Capacity

Sears, Roebuck and Co., Chicago, Ill. Urbana, Illinois, August 28, 1914.

Gentlemen:-

In accordance with your request, the undersigned visited your engine factory at Evansville, Indiana, and tested for brake horse power and fuel consumption the different sizes of your engines after same had been passed by your testing and inspection departments, and we submit a full report under separate cover.

In regard to the rating of these engines, while the relation of rated load to maximum load for gasoline engines has not been standardized, the best authorities seem to agree that an overload capacity of 15 percent is sufficient. We understand that you wish to give an overload capacity that cannot be questioned. We have therefore recommended the following ratings which will, in all but one case, give a much larger overload capacity as may be seen by referring to the table enclosed.

As to the fuel used, you will find on referring to our report that when running at half, full or maximum load the fuel consumption of the several engines was very satisfactory.

Yours very truly,

J. W. Dickerson
Associate Farm Power Machinery
University of Illinois.

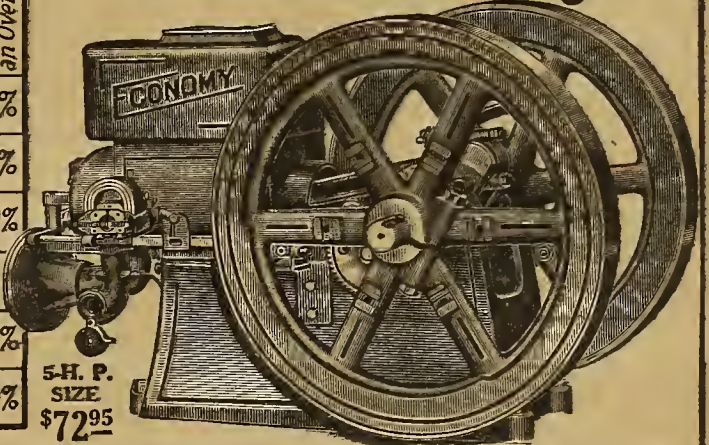
H. F. Edeke
Instructor Mechanical Engineering
University of Illinois.

Report of University Experts

Bore and Stroke of Engines Tested	Maximum Brake Horse Power each Engine Pulled	The Horse Power Ratings We Recommend	Giving Each Engine an Overload Capacity of
3 1/4 x 5	1.69	1 1/2	13%
4 x 6	3.28	2 1/2	31%
5 x 7 1/2	6.02	5	20%
5 1/2 x 9	8.66	7	23%
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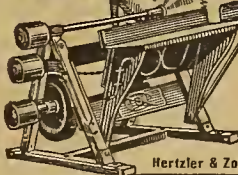
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Our Boys and Girls

Well-Trained Heifers

By George F. Jostlyn

I BEGAN training these heifers, Pansy and Daisy, when I was eight years old. I taught them to be led by a rope, and to mind "Gee!" and "Haw!" when three or four months old. When about six months old I had a little yoke that I put onto them and drove them about as oxen.

In the winter my father put a pole into the hand sled, and I hitched them to that. I used to go to a country store for grain and groceries, and would go and meet with them my sister when she came home from high school each week.

They were very honest and could always be trusted; all I had to do when I wanted to leave them was to lay the whip on the yoke and they would not stir out of their tracks.



They could be trusted

In the summer they were turned out to pasture, and the second winter there was a sawmill on the farm, and I used to draw wood and sawdust with them.

Riding after them was very enjoyable. They loved to trot down-hill as well as any ponies.

Listen, Girls!

PLEASE don't cover the walls with pictures and pennants until scarcely a glimpse of the paper beneath can be seen. Recently, in the room of a popular high-school girl, I saw this problem most satisfactorily settled. Favors received at parties, invitations, and pennants were strung on a long slender cane and hung across the corner of the room just above her desk, so that when she tired of them she had only to slip them off the cane and substitute new ones, or remove them altogether. In keeping them thus grouped she invited comparison and reminiscence, while she avoided trivial, scattered decorations over the entire room. Nearly every girl wishes to have these mementos in her room as reminders of good times, but if not handled correctly they give such a restless, peace-destroying aspect to an otherwise restful room.

A Blackboard Game

By Anna C. Chamberlain

IF THERE was anything more dreary than a rainy Saturday afternoon, Frankie Jackson could not think of it just then.

All through the morning he had watched the clouds and little dashes of rain, hoping that by afternoon it would be clear enough for him and Georgie, his older brother, to take their regular weekly visit to Grandma.

It was not very far out to Grandma's. She lived just on the outskirts of the small town wherein her son, Thomas Jackson, lived with his wife and his two small sons, George and Frank.

It was so near that George went there every evening for their supply of milk. That was just a hurried errand, but on Saturday afternoon the two boys went there for a good visit; to play under the great trees in front of the old home; to gather apples in the orchard; and, when they were tired, to sit in Grandma's pleasant kitchen with a nice fresh cookie and to listen to stories of what Papa used to do when he was a little boy.

And here it was raining on Saturday afternoon, and now that school was begun it would be a whole week before another visiting day came around.

"It wouldn't be so mean if there was anything to do here," grumbled Frankie stormily, to nobody in particular.

"Why don't you look at pictures?" asked Georgie, who lay on the floor in his favorite position for reading, flat on his stomach with his elbows propping and supporting his hands on which his chin rested.

"Seen-um all," mumbled Frank.

"Why don't you paint pictures?" said Georgie, rolling over on his back and sitting up, for his little brother's voice was dolefully suspicious of tears.

"What's the fun?" asked Frankie contrarily.

"There's the new blackboard," suggested Georgie, looking at the large piece of slate which their father had set into the wall to amuse them on just such days.

"You can't play with a blackboard," sniffed Frankie. "It ain't a ball nor a marble."

"You just can," said Georgie, getting up and looking around for the chalk. "I've thought of a fine game." Then, picking up a piece from the window sill, Georgie went to the board and wrote "p-g." "Now when you guess what word that stands for," he said, "you can write the missing letter in where it belongs."

"Humph, that's easy!" said Frank, putting an i in the blank space. Frank was a second-reader boy and "pig" was an easy word for him.

"Now I'll give you one," he said after thinking a minute and wrote "h-r-e."

"Horse," said Georgie as he wrote in the missing letters. "You can make them just as hard as you like for me, 'cause I'm in Fourth; but of course I have to be a little careful for you," and then Georgie wrote "i-d."

"You could make them harder than that," said Frankie, finishing out the letters to make "bird," and then he wrote "a-k-o-."

"You can write hard ones," said Georgie, standing with puckered brow for several minutes before he saw that this stood for their own surname, "Jackson."

"P-r-o-" was the one Georgie gave next, which was soon made out to be "parrot," and then Frankie wrote "w-n-o-," which Georgie promptly filled in to make "window."

"Here's one you can't guess," said Georgie as he wrote "o-h-r-."

"I guess I can, too," said Frankie as he wrote the letters to make it spell "mother." "Now guess yours," and he wrote "r-n-m-t-e-."

"I believe you have caught me," said Georgie when he had thought and thought. "How ever did a little second-reader think of such a long fellow? I have it," he added suddenly, and made it into "grandmother."

"Your turn," said Frankie, but just then Mama came into the room.

"It's stopped raining, boys," she said cheerily, "and the clouds are breaking away, so you can put on your rubbers and go down to your grandma's and stay until it is time to bring home the milk."

"Oh, dear!" said Frankie, his eyes on their interesting tangle of letters on the blackboard. "Do we have to go?"

And then he looked and saw that Georgie was laughing at him.



Florence Won

LITTLE Florence kept begging her father to take her to visit her grandmother, who lived at some distance. "You must remember that every time we go to see Grandma it costs ten dollars," said her father, "and ten dollars don't grow on every bush."

"Grandmas don't grow on every bush either," answered Florence promptly.

They went.—Woman's Journal.

Miss Coy—Oh, what beautiful flowers! There's still a little dew on them. His Nibs (absent-mindedly)—I know; but I'll pay it to-morrow.—Judge.

He Did

"WHY do they say 'as smart as a steel trap'?" asked the talkative boarder. "I never could see anything particularly intellectual about a steel trap."

"A steel trap is called smart," explained an elderly person in his sweetest voice, "because it knows exactly the right time to shut up."—Woman's Journal.

WISE WORDS

A Physician on Food.

A physician out in Oregon has views about food. He says:

"I have always believed that the duty of the physician does not cease with treating the sick, but that we owe it to humanity to teach them how to protect their health especially by hygienic and dietetic laws.

"With such a feeling as to my duty I take great pleasure in saying, that, in my own experience and also from personal observation, I have found no food to equal Grape-Nuts and that I find there is almost no limit to the great benefit this food will bring when used in all cases of sickness and convalescence.

"It is my experience that no physical condition forbids the use of Grape-Nuts. To persons in health there is nothing so nourishing and acceptable to the stomach especially at breakfast to start the machinery of the human system on the day's work.

"In cases of indigestion I know that a complete breakfast can be made of Grape-Nuts and cream; and I think it is necessary not to overload the stomach at the morning meal. I also know the great value of Grape-Nuts when the stomach is too weak to digest other food.

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Good-Health Talks

Suggested by Questions from Our Readers

By DAVID E. SPAHR, M. D.

Keep Well in Winter



WITH a long, cold, changeable winter looming up in the near future, the problem of suitable clothing to protect our bodies from cold is a serious and sometimes a big question to many heads of families. To the mother of a family of girls and boys who is planning the winter wardrobe for her family, a word of advice and instruction may be appreciated just now.

First, in regard to underwear. The fabrics from which underwear is manufactured are cotton, wool, and silk. The decree, sanctioned by high medical authority and universally accepted, is that while wool is the fabric most suitable for underwear, owing to its porous nature and the fact that it is a poor conductor of heat or cold, it is irritating to many persons whose skins are sensitive. Such persons have been compelled to discard it entirely. Then, to many the high cost of wool is prohibitive. People resort to cotton, silk, or linen not exactly as a substitute for wool, but because they prefer it. Cotton is the material worn by the great majority of the people. A small per cent of wool would undoubtedly add to its value.

But whatever the material, it must be light, porous, and loose-fitting. Underwear to be warm must not be too tight. We breathe through our skin, and air must have access and circulation about our bodies. If we were to cover our bodies all over with some substance that would not let the air penetrate to the skin, we would die of suffocation even though we could breathe through the nose.

Ban on Heavy Underwear

If our clothing, especially underwear, is too tight or heavy, it obstructs the circulation and renders the skin moist and tender; thus the natural resistance of the body to disease is broken down and we fall a prey to colds, catarrhs, pneumonia, from drafts of air or chilling of the body.

Many indulgent mothers dress their children in such heavy, tight-fitting garments that the free use of their limbs is impeded, the circulation of both air and the blood is retarded, and the very purpose she had in mind is defeated.

Persons remaining indoors, in houses that are kept at summer heat during the winter, should not don heavy underwear, but should content themselves with lighter underwear, and then should protect themselves from cold when going out by wearing heavy outside garments, to be laid aside when they return to the house.

If you would keep warm and healthy during winter, eat moderately of good, substantial heat-producing food, so you will be well nourished; exercise daily; sleep on a hard mattress, with just enough covering to keep warm; wear loose-fitting, light clothing, live soberly and righteously, and you will be happy.

Weak Arches and Bunions

Weak and faulty arches and deformed great toes cause many bunions and a few corns. The work of the arch of the foot is the distribution of the weight of the body throughout the foot. A human foot without an arch would be a stump; its movements would be stiff and awkward, and there would be no spring or elasticity shown in walking.

Strong elastic ligaments support the arch of the foot. These ligaments are not displaced or torn loose easily. A condition of the foot called "flat foot" is caused by a weak or broken arch. The arch is not able to support the weight that is thrown upon it, and is forced out of place more or less. In many cases of flat foot the arch supports more weight than is supposed.

The symptoms of flat foot and rheumatism are similar. This has led many persons to use quantities of anti-rheumatic medicine when the cause of the illness was flat foot. Fleishy persons and clerks, motormen, waiters, and other persons who stand much on their feet, suffer from flat foot. The pain is not confined to the feet and ankles, but extends to the legs and back. Symptoms of rheumatism in the feet and legs indicates often a condition of flat foot.

Arch supporters are used by old persons, whose muscles are not elastic, in the treatment of flat foot. Arch supporters may be bought at most shoe stores. Vigorous persons can build up weak arches by strengthening exercises.

Exercises which stretch the muscles of the foot will help a flat-foot condition. These exercises will stretch the muscles of the foot: Stand with the toes pointing in and the heel out, rise on the toes and press out slowly thirty to fifty times; stand with the feet parallel, raise the inner side of the foot, place the weight of the body on the outer border of the foot, and walk 100 yards without permitting the heel to touch the ground.

Many persons with weak arches wear down the inner side of the shoe. This difficulty is overcome if the inner side of the heel is a quarter inch higher than the outer side, as it places the greater part of the weight of the body on the outer side of the foot. Shoes should be straight on the inside and have broad heels.

Chilblains May Indicate Ill Health

Chilblains sometimes indicate broken arches, but more often chilblains are evidence of a poor blood circulation. Some children can play all day in the snow and ice and not suffer from chilblains, while other children become afflicted with chilblains when low temperatures prevail.

The difference is due usually to the blood circulation of the children. The child with a strong circulation does not suffer from chilblains like a child with a weak circulation. The child who easily contracts chilblains needs special attention paid to his health. Such a child should be dressed warmly. He should wear woolen stockings without garters, and with roomy thick-soled shoes. He should be fed nourishing foods, such as fats in milk and cream; given plenty of sleep in the open air, moderate exercise, and a tonic medicine.

Warm Chilled Feet Slowly

Many cases of chilled feet result in chilblains if warmed rapidly instead of being rubbed vigorously. Chilled and frosted feet are deficient so much in circulation that many of the smaller blood vessels are in a feeble condition. Heat expands the blood vessels, and forces onward the flow of blood. The extra supply reaches the impoverished branches before they are strong enough to care properly for it. This results in a congestion of the blood and causes much pain.

If feet are warmed first by a vigorous rub, the local blood vessels become restored to normal, and the blood only comes to them as they are ready to receive it. The same principle is involved in severe cases of freezing when a sudden application of artificial heat may induce gangrene, which may result in the loss of a toe or the whole foot.

Ulcers caused by chilblains are painful. They require much the same treatment as a severe burn. The destruction of the tissue by chilblain ulcers is similar to that caused by burns. Blisters should be punctured with a sterile needle and drained. Take particular care to preserve the dead skin of the blister in position while the new skin is forming below it, as it acts as a protection. Rub the affected parts with camphorated soap liniment to relieve the itching.

Chronic Indigestion

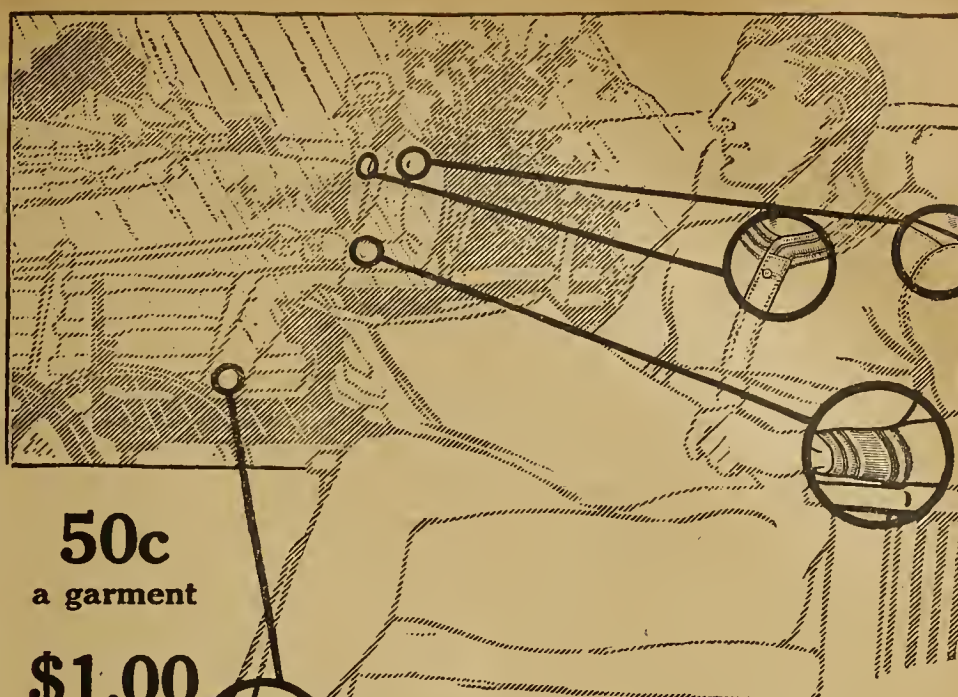
"Have had chronic indigestion for many years; what will cure me?"—H. K., Indiana.

Answer: "Chronic indigestion" and "dyspepsia" simply mean to a physician either that you have an infected gall bladder or an old chronic appendicitis. Indigestion is only a symptom of some other disease. Have your liver and appendix examined by a competent surgeon.

Invalids Baths

Many doctors are now discarding the stronger alcohol in ordering baths, and are prescribing the more agreeable bay rum, which is made in Japan from the distillation of rum and the leaves of the bayberry tree. If you want a pleasant, exhilarating bath, use this in dilution suited to your condition. For bathing the sick it seems to have a longer and more stimulating and tonic effect than whisky or alcohol.

Did you ever hear of the bee-sting "cure" for rheumatism? And did you ever know of anybody's being cured by it?



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A Search for Pasture

The Adventures of Two Cowboys Along Florence Creek

By JOSEPH B. CAMERON



FAR to the west, in the land of the Utes, are high mountains of very red rock. On their sides are horrid cliffs and cañons, and on their summits are little forests of pines. In that land the rivers run swift and deep and red. The rivers are many miles apart, and between them lie tangles of cañons and rocky mesas covered with yellow grass. In this land of the Utes the rocks are orange or red; the hills are yellow; the little thickets of piñons or cedars are deeply green. It is a land where the stars shine very brightly at night and the sun glows golden in the daytime. There the wild deer hover on the mountain slopes and come down with the deep snows to the mesas below; the cattle graze the bunch grass, climbing high the rocky trails of the mesas. It is a land of few men and good comrades and true.

We were just two comrades, Jeff and I, and very happy as we rode across the sunny mesa one fine morning in June. Jeff rode his own favorite horse, and I rode old Barney, the big strong bay that I liked so well. A little mule carried a pack, and a bob-tailed dog brought up the rear. Happy as boys we were, and as care-free. We were going exploring, no telling what adventures lay before us. The purpose of our journey was to explore certain cañons that lay on the opposite side of Green River. At this part of the country Green River emerged from a group of marvelously rough and jagged mountains. It had cut a channel down through these mountains about 4,500 feet deep, and on the summits on one side lay our summer range with its green grass and trees and flowers, and standing on this level, wide mesa we could look across to the other side and see there a similar mesa also with yellow grass and groves of trees and, doubtless, flowers, but we had never been up to explore. In fact, no one as yet had ever penetrated those mountains. There must be little creeks over there with, doubtless, grass and opportunities for cattle. This it was that we set out to find.

So gayly we rode across the low mesas, singing and calling out as cowboys will. Down some hundreds of feet below our range lay the deep cañon of the river, and as we descended the heat increased notably. On an island in the river we unpacked the mule and made camp, then pushed on across the island to where the river lay. I confess, it looked very wide as we stood on its brink, and very swift too, and neither of us had ever had any experience in swimming rivers.

"How shall we do it?" I asked.

"Well," said Jeff, "the best way is to take off our saddles, then the horses can swim better. If I were you, Joe, I would take off my clothes as well."

No sooner said than done. We stripped naked. I put my overalls and shirt around my horse's neck and, for safe keeping, hung my shoes in the same place. Instead of bridles we put halters of rope around our horses' necks, and now were ready for the river. We hesitated a little, sitting there like old centaurs. We looked at one another, and Jeff asked, "Who's going first, Joe?"

"Oh, well," I replied, "I may as well," and Barney and I led out and plunged into the water.

At first we waded, but deeper and deeper the water came up on each side, and after a little we lost our footing and had to swim. Old Barney struck out right strong, and I was not at all troubled, but felt as safe as though on a boat for a time, and then just as we reached midstream the old fellow began to feel as though he might let down and touch gravel again. And down we went, down, down; down he went till everything was covered except his nose and ears and I immersed up to my chin. That's a trick it seems that horses have when they swim deep rivers. I was right glad when the old horse resumed his swimming again. At last we touched gravel and came wading out.

"Ho, ho, hello!" I shouted to Jeff. "Come on, it's no trouble at all. It's fine."

"**J**OE, I wish you'd come back and go over with me," Jeff called out. I acquiesced and put old Barney in the stream again, and we swam it across again without difficulty, although I observed that the current bore us a long ways down the stream, and that just down below where we were fording was quite a notable rapids, and the water boiled over great submerged boulders. But we made it all right, and together Jeff and I plunged into the stream once more. Side by side we swam for a little while, and then when we were in the middle of the stream the horses let down again in that curious way they have; and when Jeff's horse let down, Jeff for some reason or other lost confidence in the horse and let him go and set out swimming alone, while the horse turned tail and started back again for the shore he had just quit.

"Come help me, Joe," called Jeff, and indeed I tried to urge old Barney in his direction, but Jeff, with splendid muscle, was swimming like a steamboat, and I could no more have overtaken him than I could have overtaken a whale. Indeed, he beat old Barney to the bank by several rods, but was nearly out of breath and terribly weary when he got ashore.

"Now," said Jeff, "now we're in a pretty fix, aren't we? What shall we do?"

"Oh, well," I replied, "we can go on all right. We can go on the one horse, taking turn about riding."

"But," he said, "I can't walk in my bare feet." Happily I had a new sombrero of that heavy felt that is almost as good as leather, and with a few strokes of my knife I cut it up and fitted it to his feet and tied them with some buckskin thongs, so he had a pair of fairly good moccasins.

"Now," I said, "we will go on." And on we went, following up the border of the river. It was incredibly rough and rocky just there, the red mountains sloped sharply downward to the stream, and we must pick our way along as best we could without a trail or level place to put our feet. Then it was that we saw coming something strange for that region—a storm. Clouds gathered, sharp thunder rolled between the mountain cañons, the lightning flashed. Incredibly deep-sounding and impressive was that thunder as it rolled and echoed from cliff to cliff.

"We must get to shelter," Jeff said. "It's going to storm."

HAPPILY there stuck out from the mountainside a great rock under which all but old Barney could take shelter. Hardly had we got there when it began to rain—and how it did rain. In desert lands when it does rain it may come with much more force than anywhere else. In less than no time the whole mountainside was a sheet of water running swiftly down. Soon a great torrent began to pour under the rock where we were taking shelter, undermining it and threatening to throw it down upon us, a rock that weighed many, many tons. We emerged from there and made a hurried run to another hiding place, more secure. Then came hail, and hailstones fell in such fury and of such incredible size that I thought they would kill old Barney, who stood exposed to their fearful peltings. In a little while the storm had passed away and the water soon ceased to come down the steep mountainside, and we went on our way, leading our horse.

It was no better going for a time, but rather rougher, but after a time we came to a flat down by the river where the going was good, and then one riding and the other walking we got along up the valley till we came to the mouth of the stream that we were seeking.

A strange little valley it was, not wider than a quarter of a mile, and as we entered it and turned up between the mountains we went between steep cliffs that towered upward for thousands of feet. Red as blood almost, they were, and covered on their summits with great pines. The little creek that flowed through the valley was running bank full, and carrying great logs and trees toru up by their roots, taking them with frightful velocity, hurling them against rocks until the ends of the logs would be battered up like a painter's brush. The sun came out. Over some of the cliffs waterfalls were pouring, the water, coming off of the hills of bare red soil, was as red as blood. There were in the valley also great heaps of hailstones, sometimes

knee-deep, washed down from the hillsides above. Steadily up the cañon we bore; and as we ascended, the valley widened. Little fields of grass were there, little fields that might support cattle but that had never been cropped by anything but the wild deer. Then on either side we saw curious picture writings that the Indians had made, the cliff dwellers of long ago; and as we gazed, high up on the cliffs from side to side we saw more than one little cliff dweller's house as perfect perhaps as it was the day it was built. Some also were in ruins. What a strange solitude it was! We felt like intruders there. We were perhaps the first white men that had ever been up this valley, certainly we were the first to ever take a horse in there.

"Now, Joe," said Jeff, "how are we ever going to get back?"

"Oh, never mind," I replied, "how we get back. Let's go on to the summit."

"But we've nothing to eat."

"Well, we're not very hungry."

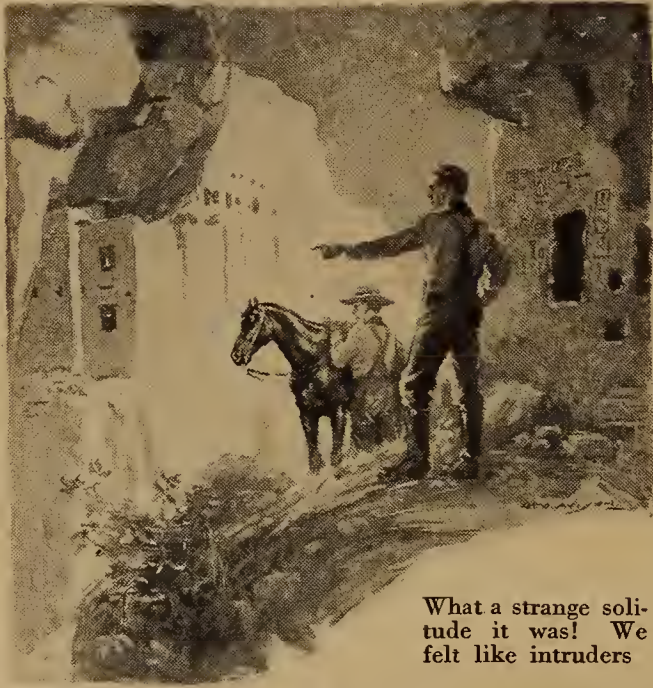
"But we've only got one horse, and we've got no blanket and we're wet through—"

"Never mind," I replied. "Let's go on while we've got a chance."

"Now, Joe, I call this only stubborn foolishness," said Jeff.

And indeed he was quite right in his characterization. We quarreled a little then, and finally he prevailed. He had right on his side. He was married and had a wife and baby, while I was only a wild and harum-scarum cowboy with no one to care anything about me.

We turned back then and rode regretfully down the marvelous little valley, and as I turned I named it in my mind Florence Creek. This name it carries today. I named it for the one girl in all the world who had ever deeply stirred my own heart. The sun set



What a strange solitude it was! We felt like intruders

before we approached the river. We hastened downward to the place where we had forded it once before. As we rode along that river we looked at it anxiously. It had risen perceptibly since we had crossed it in the morning. It flowed swifter now, and had drift logs in it; we could see them going swiftly down the strong current. It was a wicked river; there were rapids above us and rapids below us. When we reached the place of fording, there was no discussion as to who should take the horse; the married man took it of course. Jeff stripped and put old Barney into the water. Quite well he swam, although I could see that he was tired now. He had had a long day; he had been ridden perhaps thirty miles; he had forded the river already three times. Swimming rivers is hard work for horses. I watched Jeff with eager apprehension as the current swung him downward toward the dangerous rapids. He emerged just before he had reached them, and as he came out he tried to give a triumphant cheer, but it sounded across the fierce waters like a very sorry cheer indeed.

"Now, Joe," he cried, "I'll send him back for you." And he tried to drive him back again. But wise old Barney refused to come, and I was glad, for I feared that he might not make it again, as tired as he now was, he had had nothing to eat all day.

"Give it up, Jeff," I called. "I don't want him to come over."

"Well, what will you do?" asked Jeff.

"I'll swim it," I cried.

I went up the stream to the lower side of the rapids above and found there a piece of plank that must have drifted down from many hundreds of miles north of us. With this plank under me I swam out into the stream until I was nearly halfway across, and then, taking note of how far I had drifted down and how ominously near the rapids were below, there suddenly came over me a very great feeling of loneliness. I turned back in panic and swam to the shore again. Jeff was watching me from his side.

"Now what are you going to do, Joe?" he called.

"I'm going to camp," I replied. "You must do the same thing." Through all the long day I had kept a few matches dry. Any cowboy who knows anything will do that. To save my life I cannot to-day tell you how I had kept them dry. A giant cottonwood tree had fallen down at this place, the inner bark was as dry as tinder despite the rain. Soon I had a fire started and heaped the branches on. It burned gloriously, and I stood in its warmth till I was fairly warm and dry.

NEXT for supper. Growing close by were plenty of prickly pears, or flat cacti. I gathered some of these and toasted them in the flames until the thorns were burned off and they were somewhat roasted. I tried to eat them. They tasted very much as a cucumber would taste if it were well saturated with mucilage, and I was not hungry enough yet for prickly pears. On the other side I could see Jeff's cheery campfire through the tall grass and the willows, and I knew that he was having a good supper and yearned to partake of it, but it was not for me. I laid down by the fire then and went to sleep. That summer I had formed the practice of wearing a shirt without sleeves, and was dressed in shirt and overalls only. I regretted the absence of sleeves that night. It was a cold night. When dawn came I got up, and found that I had been lying for quite a long time in the ashes of the fire.

Across the river, smoke was rising up; Jeff was building his campfire too. Then he came down to the river and called out to me.

"Joe, how are you?"

"All right," I said. "How are you?"

"Fine and dandy. Now I am going to make that old horse swim across to you," he said.

Indeed, I was quite willing. If old Barney didn't come over the only alternative was to walk over rough river mesas for forty or fifty miles before I would come to the first human habitation, and there was no trail.

I was hungry and wanted to cross that river, but I did not believe I could swim it alone without getting into the rapids below. Then Jeff came down to the river with Barney. You need not tell me that horses have no understanding, for I know they have, some of them at least. Old Barney understood what was wanted of him. I went to the water's edge and called to him pleadingly:

"Come on, old Barney, good old Barney, come on. Good old fellow, come on over."

Jeff pelted him with pebbles, and he waded into the water and swam bravely to me. The water was cold this morning, and as I led old Barney out he stood shivering in the cold morning air. I then led him to my campfire, which was blazing up finely by this time where I had thrown the tree tops together once more. And then as he stood by the warmth I hurriedly undressed and sprang upon his back. I did not let myself think very much just then, for I was afraid if I got to thinking it over I might lose courage and not go in.

Bad rivers grow more and more dreadful as one knows them, and this sinister stream flowed so silent and so swift. However, we plunged in, old Barney and I, into that cold water in the early morning. Bravely he swam.

As we came ashore Jeff reached out and pulled me off my horse, and hugged me as though I were his girl. Thus we two companions were united again, and so we went to breakfast—and such a breakfast as that was!

For those were days when the world was young, and hearts were warm and quick to forgive.

Sunday Reading

Twenty-Minute Sermons

A Preachment About Preachers for Preachers, and by One

By John Clark Hill

IT IS said that somewhere in South Africa they have a custom that is a merciful provision for patient listeners. Even in South Africa public speakers are apt to become bores, just as with us. It is a fact that even the greatest orators and the most interesting talkers become bores at times. This South African tribe has fixed it so that the speaker has to consider himself. These simple people—not so simple after all—consider long speeches a positive harm to both the speakers and the listeners, and so, to protect both, they have an unwritten law that every public orator must stand on one leg only, when he is addressing an audience. When he finds that he is getting tired holding up one leg, he realizes that he must finish very soon, for as soon as both feet are on the ground he must stop.

What Can We Do?

This method may not be altogether practicable for us in this region, but it certainly gives a very sensible pointer to speakers, for no matter how interesting one may be in his address his hearers will always be grateful if he makes it short. There is no place where there is so much need for conciseness as in the pulpit. The speaker ordinarily is so much impressed with the value of his thoughts that he thinks he cannot put them forth effectively except in a long-winded speech.

A widely copied news item some time ago stated that an ordinary preacher had been remembered by a handsome legacy in the will of one of his former parishioners because he had preached sermons only twenty minutes long. This fact called attention to a very important feature in religious activities. Ordinary preachers began to think about it and investigate, and they found, to their surprise, that a large number of the best preachers of our day have pronounced in favor of the twenty-minute sermon. They have tested it. It is popular. It is what the people want. A good many people regard brevity as the crowning excellence of any sermon. It is more than likely that many a poor preacher would improve very much in his efficiency and in the estimation of his congregation were he to cut down his sermons to twenty minutes.

A minister whose work requires him to visit many churches every year said to the writer not long ago: "I hear almost universal complaint about the length of preachers' sermons. People who heartily commend the work of their pastors will, almost as a rule, say, 'But his sermons are too long.'"

Twenty minutes is enough. The average speaker can use at least twenty-five hundred words in that time. That is enough for the average hearer. The preacher may be annoyed sometimes by complaints about the great length of his sermons, and may retort with a reference to people who listen without complaint to a "lecture" that lasts an hour. He forgets that the whole service of public worship usually lasts considerably over an hour. He is apt also to forget that it is a serious mistake to call the meeting for public worship a "preaching service." He minimizes prayer and the reading of the Scriptures. A good many people think that the proper reading of the Scriptures does people more good than the sermon of any preacher, however great. The preacher should put first things first.

Twenty Minutes Long Enough

The testimony of men who have adopted the twenty-minute scale indicates that it means a very decided increase of power. Measuring the length of a large number of printed sermons of the men who are regarded to-day as the greatest, most popular preachers of the English-speaking world, it is found that they will, almost as a rule, come nearer to twenty minutes than the former regular limit of thirty. One of the British preachers is reported to have said not long before his death that his sermons were rarely longer than twenty minutes. "Ian MacLaren," the Rev. John Watson, in his farewell sermon in leaving the pastorate, said that were he to live his pastorate over again he would preach shorter sermons. People are willing to listen carefully to the whole of a sermon when they are sure it will be short. They are thus more apt to retain a complete impression.

F.W.

A pastor who recently adopted this time card for his sermons writes:

"During the past few months, since I have been preaching twenty-minute sermons, more people have spoken to me about the good impressions of my sermons than ever before in all my ministry. I attribute it altogether to the fact that my sermons are only twenty minutes long and therefore more concise."

Of course there are special occasions when there is a demand for more time, and the people will stand it without a murmur when the excess is tempered with mercy.

Which Way are the Teeth?

A MAN who drives across his field of mown grass with the teeth of his rake turned upward will never gather much hay. He may drive back and forth till he is tired to death and the wheels drop off his machine, but it will be as empty at night as it was in the morning.

Get right at the start and stay right, and you will be right at the end of the race. Many a man works and worries clear through to the end of his life's day and wonders why he has so little to show for it at sundown. The teeth of his rake have been turned up. He has not applied himself properly. He has not used his opportunities as he should.

Stop now, and ask yourself, "Am I working with a rake bottom-side up?" If you are, straighten up and go ahead. There is yet time for a golden harvest.

Thanksgiving, 1915

By Charles B. Driscoll

FOR the yield of each bountiful acre, for the season's abundance in store, we thank Thee, Beneficent Maker, as our Puritan sires did of yore. In a year when War's sad desolation has engulfed half mankind in its throes, Thou hast graciously shielded our nation from the withering breath of its woes.

Thy judgments are righteous and holy, Thy counsels benignant and just; Thou exaltest the humble and lowly, and Thou smitest the proud in the dust.

With our thanks for Thy blessings unnumbered, hear, O Lord, in Thy mercy, our plea for the lands that with dead men are cumbered; for the brave hearts that perish at sea; for the toilers of Europe, our brothers, who by kings are incited to kill; for their babies, their wives, and their mothers; may Thy solace abide with them still!

Accept, Lord, our humble thanksgiving, and when War's last vile bullet is sped, do Thou lighten the load of the living who are waiting to meet their loved dead. Looking down upon battlefields gory, let Thy peace be upon them again, and Thine own be the honor and glory, forever and ever. Amen.

Make Somebody Happy

WHAT makes the old dog creep round to the sunny side of the house? Isn't it because he likes to feel the warmth coming down? Smile on him and tell him what a good fellow he is and he will feel just as warm round his heart as you do when somebody praises you. Then he will caress you and laugh back into your eyes in the best way he knows. All the world loves a cheery man.

There is no sabbath day for the man who frets and scolds because his work is not going on Sunday. The sabbath day is what is in the heart, not something that the book of laws says.

It is fine to sing psalm tunes on Sunday, but don't you think your wife would have lots more faith in you if you should turn the wringer or bring in a pail of water now and then on Monday?

Let's not worry ourselves old over things that are no more likely to happen than the North River is to get afire some day. Most of the gray hairs we have get there through some fault of our own.

Never mind if your goose turns out to be a chicken. If all the world could have just plain chicken for dinner every day, hunger would fly to the cat-hole.

Let's be kind to the Raggedy Man. He isn't having such an awfully good time. Lighten his way with a smile and a kind word. Good big hunk of bread and butter goes along well too.

It is a thing to be thankful for if your ham sandwich has a slice of ham in it.

The tallest man in the world is the one who walks this old earth with his head so high that never a sound of envy or hatred or criticism reaches him.

Brace up the harder the stiffer the wind is against you. What would become of the kite if the wind did not blow?

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The Rise of George Simmons

By CHARLES H. LERRIGO, M. D.



Chapter IV—The Mad Dog

BY THE time the Grange Fair came, all the neighborhood knew of the Simmonses' good fortune. Scarcely a farmer in the community but had his comment on "the luck of some folks."

Mrs. Simmons was home from her extended vacation. After the first shock she had settled down to her cleanliness and prosperity as naturally as if bred to it. The plan was, however, that as soon as possible she should move to town with the children for school advantages and leave the farm to George.

My personal views were opposed. I contended that any prosperous farming community may have a school as good as any in the city.

I don't propose to tell all about that Grange Fair. John said it was to be a "corker," and I believe it was generally admitted that it met the specifications. The thing most important to this narrative was one of its minor features, and one about which I claim no professional knowledge. It was the dog show.

One of the things many people held against the Simmonses was their dogs. George did love a good dog, and frequently several of them. I had hoped this would place him better in John Gandy's eyes, for John was also a dog lover. He certainly never criticized George on that point.

"Most elevating thing he has about him," he declared.

At this bench show (they called it that, though I looked in vain for a bench to rest my weary muscles) John Gandy was an exhibitor for the first time. He had come into possession of a bulldog, given to him by one of the commission men who handled his stock. John pointed out seventeen points in which he was the superior of any dog he had ever seen.

The bench show had a good position about halfway down the big hall which was the main building. It was a long, high building with one big door at its north entrance and another at its south. Between these ran a long lane. On either side were booths, stalls, pens of all descriptions. Visitors passed up one side and down the other, or zigzagged across at their pleasure, but since there were only the two main doors for entrance and exit, the natural way was to travel up and down the sides.

As I passed the pen which held John's bulldog I came across George Simmons making a very close study of something in the compartment.

"Admiring John's dog?" I inquired. George looked up suddenly.

"It's you, Doctor," he stated needlessly. "Say, come here a minute. I want you to take a look at that dog over in the corner. He's sick. He acts sick all over. I've been watching him for half an hour. I never saw a mad dog, but my guess is that he's one."

"It isn't always easy to spot a rabid dog even if you have seen one," I explained, "but that fellow acts the part, to my mind. I particularly don't like the crouching of his hind quarters as if he were lame. That may mean the paralysis that so often goes with rabies."

Just then, as if to refute the suspicion of paralysis, the dog straightened up and began circling around the pen. George promptly called my attention to his action.

"Doesn't look much like paralysis," he commented.

"Perhaps not, but he doesn't run just right. And chasing himself in that fashion doesn't look good either, nor the way he snaps his jaws. The man who is exhibiting him better take him home and tie him up."

Quite a crowd had gathered as we talked, and soon someone brought the dog's owner.

"Nothing the matter of him at all," the man insisted. "Just a little nervous with the strange place and the crowd."

"I can't agree with you," said I. "You came here from the city. He's in crowds every day, isn't he?"

"Yes, but it's being shut up like this that bothers him."

The man opened the gate and passed into the pen.

"See how affectionate he is," he exclaimed as the dog leaped up to lick his face; but as the lick changed to a snap his remarks were not convincing.

"You'd better take him home," I protested.

"I'm going to bring him out and you can see he'll be himself in a jiffy," said the man, leading him out by the collar.

John's bulldog slipped out behind him before the gate closed.

"Let the crowd stand back and give him some show to be natural," I suggested.

As a matter of fact I was anxious for that crowd to disperse.

Suddenly the dog ended the argument for us. With a nasty yelp he jerked himself free, made a sudden dive at Bull, gave him one vicious bite, and was off like a flash. John Gandy, who had just come up, held Bull's collar, and his tight grip kept him from pursuit.

The people needed no counsel now. As the dog ran to and fro in the long hall, seeking escape, they crowded to the sides and shrank up against the pens.

The big doorways at each end of the hall were jammed in a moment with a hurrying, scurrying mass.

The unfortunate dog ran wildly from side to side of the big building. No doubt his great desire was a way of

Synopsis of Preceding Chapters

ALTHOUGH he was the son of a drunken and shiftless father, George Simmons was determined to be a successful man, and to bring his family up to a respectable level. The immediate cause of his zeal was his admiration for a lovely girl of good family.

Alice Gandy did not discourage the attentions of young Simmons and even defended him whenever occasion arose. As the result of a few days' illness which had once detained her at the Simmons place, blood tests were taken which indicated that Alice was a typhoid carrier, and she spent some time in town taking treatment from the doctor. Incidentally, she met George Simmons on the street sometimes.

The Doctor admired George's efforts to rise, and helped him by friendly advice and service. The result of Alice's blood tests shocked the doctor, and he set to work to rid the sweet, delicate girl of so dreadful a disease.

John Gandy, the cousin with whom Alice lived, by persistent criticism and opposition, stiffened George's determination to succeed and Alice's championship of George.

"Paw" Simmons' death from typhoid fever cast another shadow on the family reputation, but a receipt discovered later showed that the old man had accidentally invested in a valuable insurance policy.

Ella, the oldest Simmons girl, faithfully aided and abetted George in his "clean-up campaign."

escape, but the excited crowd thought he was seeking victims.

It was a mighty exciting moment and, of course, a very brief one, for it was out of the question for that crowd of sturdy farmers to allow such panic for long. But a very brief time is sufficient for a biting dog in a crowd to do damage.

The first relief that I saw came from young George. I will admit that I made my observations from a grand-stand reservation in a pen of registered Hampshires. He had wrapped his sweater around one arm in a style he had probably seen in some book and was headed straight for the animal. The dog made an ugly snap at the extended hand. George coolly rammed it into his throat, grabbed the collar in a tight grip with the other hand and, lifting the animal clear off his feet, made a rush for an empty pen. Some attendants threw it open and he cast the struggling animal far into a corner and slammed it shut.

But in spite of his precautions the sharp teeth had penetrated the folds of the protecting garment and sunk through the browned skin deep into the muscle.

Now that the dog was in safe custody the crowd came hurrying to see and admire their young deliverer and to sympathize and also to advise him.

But George was in my hands.

"He isn't badly hurt," I insisted. "He is going with me now and I'll take care of him."

But we had barely reached the door before a little group of important personages headed us off.

"We have a car right here," said the spokesman. "We will run him right over to Douglas County and have Doc Smouch put the madstone on him."

"You will do nothing of the kind," I stated definitely.

"Now, Doc," insisted the man, "you mustn't let your prejudices keep the boy from gettin' the good of the madstone. It's the only one this end o' the State. It's been in Doc Smouch's family sixty year. It'll suck out the poison and then you can give any treatment you want. It won't interfere none, an' it ain't goin' to cost him a cent."

"Jim Harris," I said sternly, "do you consider yourself a good butcher?"

"Putty good, Doc. Putty good."

"So do I, Jim. But I think you're a mighty poor doctor. Leave this to me."

But Jim still protested.

"George is the one to say," he objected. "He'd order have his chanct if he wants it."

George looked at me with a laugh.

"I know you mean well, Jim," said he. "And I expect you know a lot more about dogs than the doctor. I'd buy sausages at your shop any time. But dog-bites are Doctor's business and the doctor is going to run this."

"But, Doc," Jim did hate to be cheated out of his sensation, "it won't hurt none to put the stone on first. Then you can treat him and he'll get the benefit of both of 'em."

The crowd had pushed up that way until we had a great audience. Many of them were evidently Jim Harris' sympathizers, and I saw that it would be wise to explain.

"You are mistaken in that supposition, Jim," I explained. "It would be very bad practice to apply a madstone or any other dirty thing to an open wound, and might do a lot of damage, especially if

allowed to remain long. I'm going to take George right to my office and disinfect and cauterize the wound. Meantime our suspected dog will be watched for a few days and if he is mad, George will take the Pasteur treatment. Most of the intelligent crowd was undoubtedly mine, but a dissenting clamor rose from two directions.

"Ye ain't goin' to let that rabid animal live, Doc?" was one cry.

"We certainly are for a time," I replied. "Not for the dog's sake, but

for the sake of George Simmons. The dog is now shut up where he can do no harm."

"Why not cut off his head and have the brain examined?" cried one of my more intelligent questioners.

"I would do that if it were absolutely necessary to kill the dog at once," I replied. "But though that examination generally gives satisfactory evidence, the very best way is to watch the dog himself."

The other objection had not died away during the discussion. Now it came out again, clear and strong.

"You didn't order take the boy off to Chicago for no Pasteur treatment. Just because he's got a little money now ain't no reason he should be robbed by no such fake."

I fixed the speaker with my glittering eye.

"What do you happen to know about the Pasteur treatment, Mister Commissioner Bellows?" I asked.

"I know it's a fake," he insisted. "I know it cost the county two hundred and fifty good dollars three years ago when Bob Henderson was bit."

"Well, Bob's right here. You're alive yet, aren't you, Bob? Do you suppose you're worth two hundred and fifty dollars?"

"You bet I am," asserted Bob with emphasis. "An' it ain't no fake, nuther."

"Let me give you a few facts, Commissioner," I continued. "Any life you can save is worth more than two hundred and fifty dollars to the county. Moreover, every progressive State in the Union makes a provision for free treatment for those who can't pay."

I decided to give George the Pasteur treatment myself. The vaccine used can be prepared in [CONTINUED ON PAGE 26]

The Quiltin' Bee

By Samuel Minturn Peck

Drawings by Ethel Pennewill Brown



IT WAS a crisp November;
We'd had a frost or two
That made the air like cider—
And yet the skies were blue.
'Twas just the sort o' weather
That fills the soul with glee,
When Cousin Sally Dillard,
She gave a Quiltin' Bee.



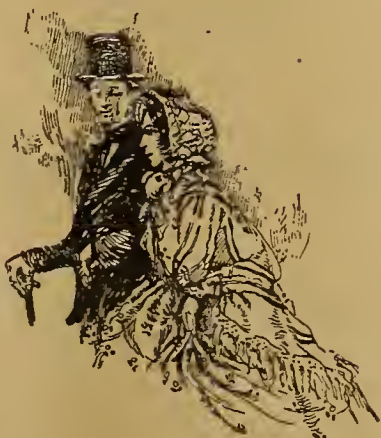
The girls all fetched their thimbles,
The fellows fetched the girls.
What dimples and what blushes,
What laughter and what curls!
I loved sweet Polly Atkins—
But did she fancy me
Or Bijah Brown, my rival,
At Sally's Quiltin' Bee?



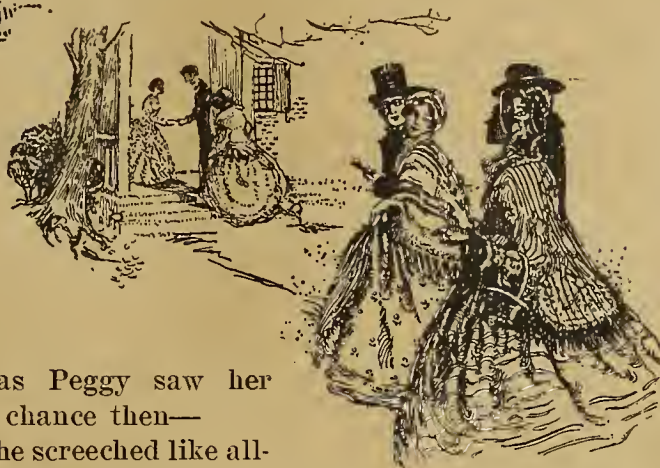
Oh, Polly, she was wilful;
She kept the folks a-guess
If 'twas to me or Bijah
She'd finally say, "Yes."
And Peggy Payne, the schoolmarm,
Red-haired but pretty, she—
She had her eye on Bijah
At Sally's Quiltin' Bee.

What merry jokes we
cracked there,
Around the quil-
tin' frame!
And when the quilts
were finished
We played a kiss-
in' game.
And I, when Bige
was blindfold,

I was too mad to see
Him kissin' Polly Atkins
At Sally's Quiltin' Bee.



Then Cody tuned his fiddle,
And loudly stamped his heel,
And everybody tripped it in
The old Virginia Reel.
Bige tried to cut the Pigeon's Wing—
Oh, how we roared when he
Slipped up and came down floppin'
At Sally's Quiltin' Bee!



'Twas Peggy saw her
chance then—
She screeched like all-
possess'd,

And back she fell a-faintin'
On blushin' Bijah's breast.
"You love me, don't you, Bijah?"
On comin' to, said she.
Poor Bige! What could he answer
At Sally's Quiltin' Bee?



So I went home with Polly,
And screwed my courage high
To pop that night the question,
To get my girl or—die!
Don't ask me how I did it,
Way back in fifty-three;
But I won Polly comin'
From Sally's Quiltin' Bee.



The years have brought their changes,
The world's a-golfin' now,
The young folks 'pear to like it.
Good land! to me, I vow,
It seems almighty triffin',
This drivin' from a tee—
But, oh, the glorious fun we had
At Sally's Quiltin' Bee!



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and every detail is handled in a masterly manner. The result is a wonderfully harmonious blending of beautiful color tones equaled only by the original paintings and possible only in this advanced age of the printing art. The titles of the pictures and artists' names are:

1. THE ROSES' FRAGRANT MESSAGE

By B. Lichtman

2. THE SIGN OF SURRENDER

By Earl Christy

3. HERE THEY COME

By Frank Desch



In this small black-and-white illustration it is impossible to convey even a slight conception of the beauty of the Calendar. Remember that each picture is 11x17 inches in size and is printed in ten colors.

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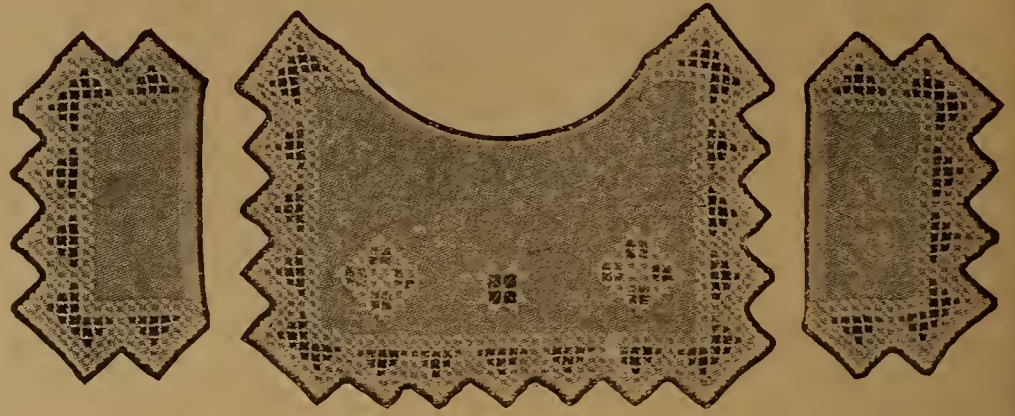
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P. O. R.F.D. No. State.
Nov. 20

Your Christmas Needlework

What to Do this Year to Brighten
the Yuletide for Your
Best Friends



HERE is an attractive set of collar and cuffs in hardanger embroidery which you can make before Christmas to surprise your mother, your aunt, or your best friend. Dainty collar and cuffs transform a plain, dark wool dress into a smart and festive garment, and help one to keep fresh and neat day after day, even while wearing the same dress or suit. Probably no other gift will be more appreciated or will give better service. The wearer will remember you gratefully many times during the next year for your kind thought and tasteful work.

THIS pretty crocheted vest, worn under a coat that would otherwise be too light, will keep a girl warm in severe weather. Its good lines and neatly fitting girdle give the garment smartness and distinction. To be worn under the party cloak it should be made of dainty colors.



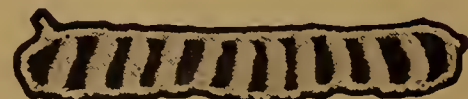
THERE are many good color combinations for this vest, such as rose and pale blue, Belgian blue and gray, green and white, brown and deep cream or canary-yellow, or gray and pink. The ground may be of the darker color to match suit, and the stripes of the contrasting tint.

A SET of medallions (1) of hairpin lace and crochet, or a few yards of the tiny edge (3) or beading (2), will make a most acceptable gift for anyone who likes dainty blouses or who has small children to dress. All three are easily made, and are handy pick-up work for evenings, spare minutes, or neighborhood thimble parties. You will be surprised to see how the work will grow by Christmas time.

THE narrow edge makes a pretty trimming for the shirt-waist frill which is still good style, or, done in fine thread, edges the most classy hand-made handkerchiefs for that person who “has everything you can think of” and so is difficult to buy for.



1



2



3

THE little beading makes a finish of exquisite daintiness for the neck and sleeves of a baby dress, or when set into the seams, cuffs, and collar of a “best” linen shirt waist. For embroidered or sheer underwear this beading makes a trimming which is very appropriate.

HOW TO ORDER THE DIRECTIONS: For each of the above designs carefully thought out directions have been prepared. These directions will be sent to subscribers who request them. The directions for the collar and cuff set will cost four cents; directions for the crocheted vest, four cents; medallion, beading, and edging directions, four cents. Or if you want all of the designs shown on this page, send ten cents in stamps. Address your letter to the Fancy-Work Editor, FARM AND FIRESIDE, Springfield, Ohio.

New Patterns For the Christmastide



No. 2929—Sailor Hat with Soft Crown. One size. Pattern, ten cents.

No. 2909—Doll's Clothes: Romper, Overalls, and Sacque make dollies look like the children themselves. For dolls 10 and 18 inches. Material for romper and overalls, five eighths of a yard of twenty-seven-inch for each; for sacque, three eighths of a yard. Price of this pattern, ten cents.

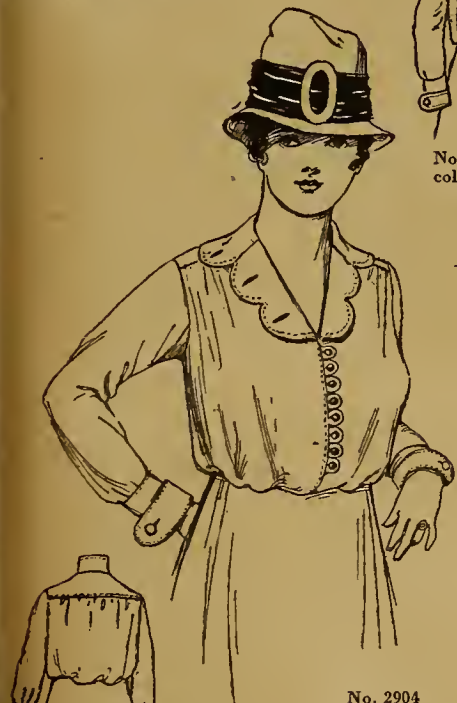


Woman's Home Companion patterns are made for women who want their clothes right but do not want them elaborate, or made over because the pattern was unsatisfactory. They range from simple toys to complete dresses. With these patterns you purchase the pleasure of having your cloth cut to advantage, your pieces match easily, and your garment fit without trouble. All patterns are ten cents. To order, send the correct amount, writing your name and address clearly, to: Pattern Department, FARM AND FIRESIDE, Springfield, Ohio.



The transfer face which comes with the rag-doll pattern

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Showing a simple use of self material for trimming the blouse of colored material.



No. 2904—Shirt Waist with High or Low Collar. Cut for 34 to 46 inch bust. Requires for 36-inch bust, three and one-fourth yards of twenty-seven-inch material. Pattern, ten cents

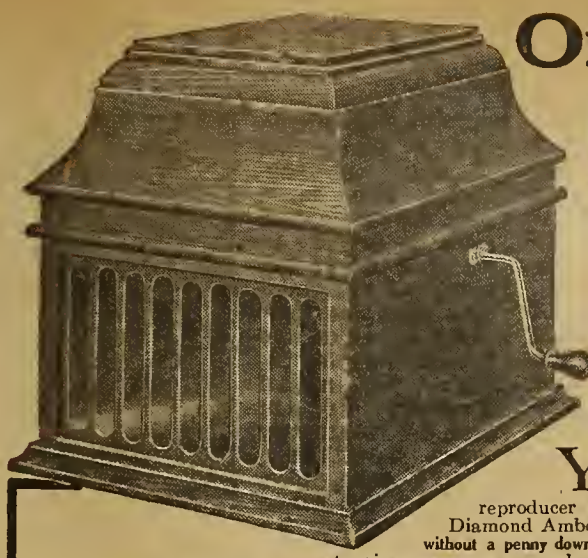
No. 2900—Tailored Waist with Applied Facing. Cut for 34 to 42 inch bust. Requires for 36-inch bust, three and one-half yards twenty-seven-inch material. Price of this pattern, ten cents

No. 2911—Cowboy Play Suit. Cut in 4 to 10 year sizes. Requires for 8-year size, four and one-fourth yards of twenty-seven-inch material. The price of this pattern is ten cents

No. 2912—Soldier Boy Suit. 4 to 10 year sizes. Material for 8-year size, three and three-fourths yards of twenty-seven-inch. Pattern, ten cents



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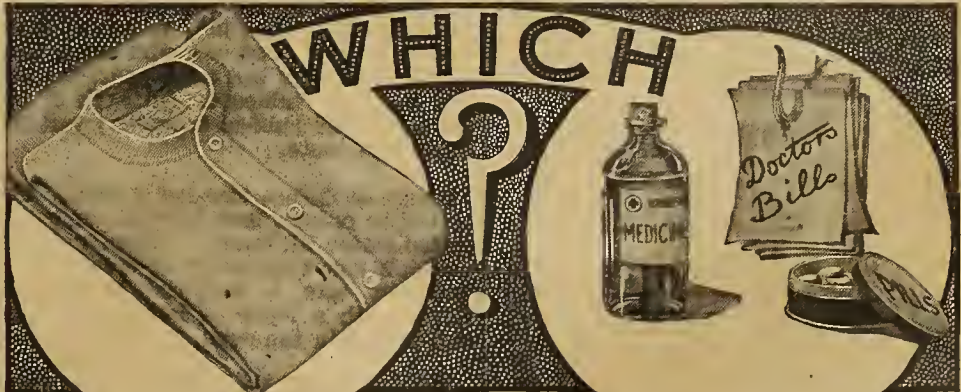
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"From childhood up I had been a coffee and tea drinker and for the past 20 years I had been trying different physicians but could get only temporary relief. Then I read an article telling how some one had been helped by leaving off coffee and drinking Postum and it seemed so pleasant just to read about good health I decided to try Postum.

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A Kalamazoo Direct to You

Your Thanksgiving Dinner

The Rise of George Simmons

[CONTINUED FROM PAGE 22]

EVEN so simple a dinner as the one suggested here is a task for one or two cooks to prepare in half a day, but many of the articles may be prepared a day or two beforehand; for instance, the salad dressing, cream sauce, cranberry sauce, bouillon, fruit cake, pies, and even the lemon cream may be made the night before.

For table decoration nothing could be prettier than bittersweet, dogwood berries, or a mound of fruit—apples, pears, and grapes.

These, with fresh table linen, bright silver and glassware, and appetizing food will make as attractive a Thanksgiving table as one could wish.

Here are recipes to fill in the suggested menu, except for cranberry sauce and pies, for which each housewife has her own favorite recipes.

Tomato Bouillon—Cook three pounds of veal shank and one pound of beef until meat falls from the bones; take out meat and set away until cold; skim off the fat, return to kettle with a sprig of parsley, one small onion, a bay leaf, one stalk of celery, and one-half cupful of tomatoes. Cook half an hour, and strain, when there ought to be about two quarts of liquor. Serve with small squares of dry toast.

Cream of Tomato Soup—One quart of milk, one can of tomatoes, one small teaspoonful of soda, one tablespoonful of flour, and one tablespoonful of butter, pepper and salt to taste. Heat the tomatoes and press through a sieve. Add the soda, put in the cold milk, and bring to a boil. Thicken with a tablespoonful of cornstarch or flour dissolved in a little cold milk. Add the butter, and when ready to serve place several small squares of thin toasted bread in the soup plates and pour the hot soup over them.

Oyster Dressing for Turkey—One pound of bread crumbled fine, add two stalks of celery chopped fine, one-half cupful of butter melted, salt and pepper to taste. Add to this one quart of the best oysters, strained from their liquor, and carefully picked over for bits of shell. When oysters are mixed with bread, add enough of their liquor to moisten stuffing well. Fill the turkey, and baste with hot water to which has been added the remainder of the oyster liquor and a lump of butter.

Creamed Turnips—Cut peeled turnips into half-inch dice, boil in salted water and drain, pour over a cream sauce made of one cupful of hot milk poured gradually over one tablespoonful each of butter and flour rubbed together; salt and pepper to taste.

Scalloped Onions are easily made. Peel and slice onions, and let cook in boiling salted water till tender. Drain well, mix with an equal quantity of cream sauce, and put into a buttered baking-dish. Cover with a layer of buttered crumbs, and brown in the oven.

Cream Slaw—Heat a rounding tablespoonful of butter and sugar with one



Thanksgiving Menu

Tomato Bouillon
or
Cream of Tomato Soup
Roast Turkey with Oyster Dressing
Mashed Potatoes Cranberry Sauce
Scalloped Onions Creamed Turnips
Waldorf Salad or Cream Slaw
Mince and Pumpkin Pie
or
Lemon Cream and Fruit Cake
Nuts Cider Coffee
Candied Orange Peel

one cupful of cream or milk, and cook in a double boiler until it thickens like soft custard. Stir often. This will keep in a cool place for several weeks and is ready for use in any salad. May be thinned with sweet or sour cream.

Lemon Cream—Separate four eggs. Beat the yolks until they are of a lemon color, add five tablespoonfuls of granulated sugar and the juice and grated rind of one and one-half good-sized lemons, or two small ones, and stir well. Heat over a slow fire, stirring carefully so as not to scorch, until the custard begins to thicken. Set in a cool place while you beat very stiff the whites of the eggs with a little salt and two tablespoonfuls of sugar. With the egg beater, whip the thick, yellow custard into the whites and put away in sherbet cups to chill. The cream should be quite stiff, and it may be made several hours before the meal and allowed to stand in a cool place until ready for use.

Inexpensive English Fruit Cake—This cake is neither so rich nor so expensive as most fruit cakes, and it does not have to be made long before using. It keeps well, however, if properly cared for. Mix in a good-sized bowl two cupfuls of brown sugar, one-third cupful of butter or one-half cupful of suet creamed together, three cupfuls of flour, two teaspoonfuls of baking powder, three eggs, and one cupful of milk. Add to the mixture one teaspoonful each of ginger, allspice, nutmeg, and cinnamon, and one-half teaspoonful of cloves, one cupful of currants, one cupful of raisins, five cents' worth of citron, and one teaspoonful of almond flavor or one-half cupful of nuts. Bake in a loaf.

Candied Orange Peel—Cut the peel into narrow strips, and let soak in salt water overnight. Put into cold water and let come to a boil, then put into cold water again, and cook until tender (you can tell by trying with a silver fork). Then take one pound of sugar to one pound of the peel and cook until it is thick and waxy. Then remove it from the fire and turn onto a platter to cool, and sprinkle with granulated sugar.

cupful of vinegar and add one cupful of sour cream beaten with one egg and a rounding teaspoonful of flour. Let it boil two or three minutes, then pour onto two quarts of finely chopped cabbage seasoned with salt and pepper and dry mustard.

Waldorf Salad—One cupful of apples, cut in cubes, one cupful of celery cut fine, one-half cupful of hickory nuts or walnuts cut in pieces. Serve on lettuce with Boiled Salad Dressing, and garnish with spiced cherries and nut halves.

Boiled Salad Dressing—Mix together one teaspoonful of mustard, two teaspoonfuls of salt, a dash of cayenne pepper, two tablespoonfuls of sugar, and stir them into the well-beaten yolks of three eggs. Melt two tablespoonfuls of butter in a half cupful of hot vinegar thickened with a teaspoonful of flour. Pour the hot vinegar into the eggs slowly, stirring meanwhile. Add

any first-class laboratory. Nowadays a doctor by securing the vaccine from the nearest laboratory each day by mail, can personally treat his patient without either one of them leaving home. I thought it best to bring George as far as town, however, because the vaccine must be administered in daily doses for at least twenty-one successive days, and the distance of the Simmons farm from town might have interfered.

My wife and Alice occupied the back seat of the car. They wanted to take their hero in between them that they might support him if he should faint, but both George and I laughed at the idea, though I do not think George was as enthusiastic as I in declining the offer.

Just as we were pulling away, two or three excited men hurried after the car. "We are the Front Lawn Committee," one of them shouted. "We thought it might do George good to know his lawn has won first prize."

It was good news, though I had a shrewd guess that the committee had just come from a hastily called meeting which had not been uninfluenced by a desire to offer some tribute to heroism.

We had not long to wait for a report from the suspected dog. He grew worse so rapidly that his rabies were very soon beyond question.

George took the announcement with the fortitude of a real hero.

"When shall we begin the treatment, Doctor?" was all he said.

"We begin to-morrow, George. I have wired to Kansas City for some vaccine. Don't you worry about it. You'll be all right. I'm going to keep you right here until you are."

I think there was a great deal of consolation to George in that detail. You see, he would be a fellow patient with the lady who was undergoing my antityphoid treatment.

"You're getting yourself in a pretty pickle," said my wife. "John Gandy will never forgive you. First you bring his cousin, whom he looks after so carefully. Then you bring George Simmons into the house for a matter of three weeks."

It was awkward, and I determined to set matters straight the next time I saw John. The job was not as hard as I anticipated. The very next day he walked into my office.

"I came to see you at the suggestion of our preacher, Mr. Frank," he said with a certain degree of embarrassment. "I have been worried about Bull. I hated to kill him, and I didn't want to stand by and see him develop rabies. When Mr. Frank heard of it he made a special trip to my house to suggest that I get you to give the dog the Pasteur treatment."

"Good idea, John. I'll be glad to do it. And I believe it will work as well on him as on George."

John did not seem to be quite through yet. Since Mr. Frank was in it, I rather expected there would be something deeper involved than Bull's treatment.

"Mr. Frank didn't seem to think I was quite fair in my attitude to George," continued John. "He rather demonstrated to me that every man has a right to be considered innocent until proven guilty. He might near convinced me that I owe George an apology unless I can prove that the Simmons brought the typhoid to our district. But there isn't any doubt about that, is there, Doctor?"

"Why can't you let that thing die, John, and be on good terms with George without any more words? I was going to speak to you about it the first chance I got, anyway. You know I'm keeping George at my house while I treat him?"

"I've heard it," he assented.

"Well, we know you don't seem to like George, and the Missus insists that you will think I planned to have him there while Alice was in the house on purpose to give him a chance. Now you know there's nothing to that?"

"I know it," John admitted; then his mind doubtless reverting to the scene of a recent evening, he added: "He doesn't seem to be greatly in need of a chance."

"You're right he doesn't, John. And what puzzles me is why you should make any objection to such a good fellow."

"I should think you could see, Doctor," he said wearily. "It isn't George that I object to so much as his family. How can I help marry a sweet girl like Alice into such a family—a typhoid family!"

Good old, honest, stubborn John! I hated to strike the blow. It went sore against me. But there seemed no other way to overcome his prejudice.

I waited to set my facts clearly in order. Then with unerring precision and irresistible force I hurled them at him. The source of the Simmons typhoid was discovered. They had contracted it from Alice Gandy, bacillus carrier! Typhoid Alice! John Gandy certainly owed an apology to George if the preacher's word carried any weight.

[CONCLUDED IN NEXT ISSUE]

EW



Let us be thankful!

HOW ABOUT YOUR CHRISTMAS GIFTS?

NOT forgetting, are you? The prancing reindeer and the jingling bells, and the little chubby chap with whiskers and the cheery smile who drives the outfit? Santa is expected, you know, and his visit is only a couple of weeks away. It is about time to be giving some serious thought to the "Eternal Question"—What am I going to get for Bobby?—Simply have to get something, you know. 'Twouldn't do to disappoint the little fellow. And there's the rest of the family—and friends—and neighbors. Costs like everything, but then Christmas comes but once a year, and who's going to count the cost against the pleasure of "Giving"? It's worth the price of a dozen gifts to bring that delighted "Christmas Expression" into even one pair of childish eyes.

As for the gifts, *Farm and Fireside* has some practical suggestions to offer. Any of the articles illustrated below will make an attractive present and the best of it is that you can secure any one of them with your renewal subscription to *Farm and Fireside*, or you can have one or more of them free of all cost for getting up a club of subscribers. Your own subscription can count as one in your club. Here's your chance to be a real Santa Claus. *Now* is the time to act.

THESE OFFERS EXPIRE ON DECEMBER 10

Handy School Satchel

Sent Free for a club of two yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year, for 60c.



No. 908

A nifty gift for a boy or girl going to school, convenient for carrying books and papers; can be used for many other purposes also. Made of a good quality oil-cloth, snap flap, and strong shoulder strap. *Sent postpaid.*

Valuable-Papers Wallet

Sent Free for a club of two yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year, for 60c.



No. 785

This wallet is 10 1/4 inches long by 5 inches wide and is fitted with eight tough manilla envelopes for filing receipts and other important papers. Envelopes are printed as follows: Business Memo., Clippings, Life Insurance, Fire Insurance, Contracts, Notes and Mortgages, Deeds, Wills; covered with black imitation grained leather, stamped "Valuable Papers" in gold leaf. *Sent postpaid.*

Practical Keyless Lock

Sent Free for a club of four yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year, for 80c.



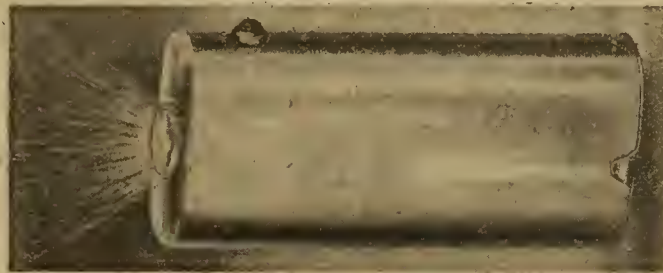
A real keyless lock, one that will always work (if you have the combination). Ideal for stable doors or anywhere that a good reliable padlock is needed. With suitable chain, can be used for automobile. Has no keys, levers, or dial, opens like a safe. Comes packed in box with combination and full instructions. *Sent postpaid.*

Get FARM AND FIRESIDE Without Cost

Here's how:—Get two of your friends to subscribe for *Farm and Fireside*, one year each at 35c. Send us the 70c and their names and addresses, and we will send YOU the paper one year for your trouble. Be sure to enclose your own name and address.

Electric Flash Light

Sent Free for a club of THREE yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year, for 70c.

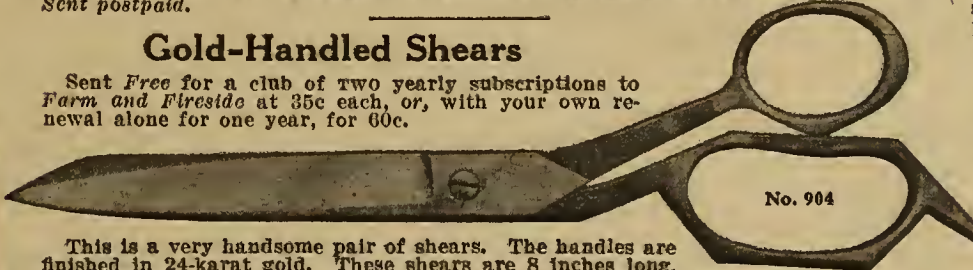


Premium No. 906

This flash light can be carried in the pocket, but will often serve as a lantern. It is well built in every way, has a powerful reflector which produces a strong white light from a small bulb. The battery furnished with the light will last for a long time, but can be replaced at any electrical supply store at a small cost. *Sent postpaid.*

Gold-Handled Shears

Sent Free for a club of two yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year, for 60c.

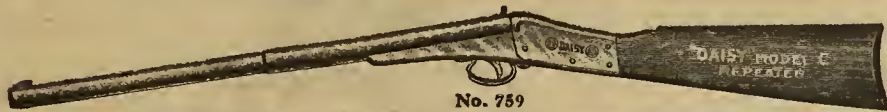


No. 904

This is a very handsome pair of shears. The handles are finished in 24-karat gold. These shears are 8 inches long, with steel blades. A very acceptable gift for any woman. *Sent postpaid.*

Celebrated "Daisy" Air Rifle

Sent Free for a club of six yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year, for \$1.25.

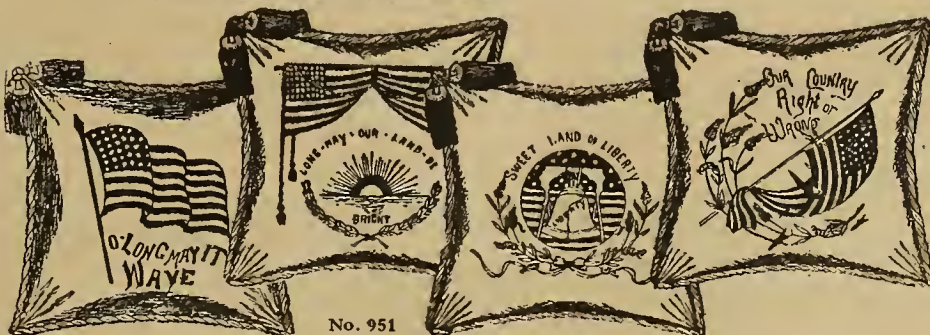


No. 759

The famous "Daisy" air rifle needs but little comment from us. The rifle we offer is a repeater, shoots 350 times without reloading. Expert workmanship has made this a wonderful rifle. We have furnished thousands of them to *Farm and Fireside* boys in past seasons. Makes a dandy gift. *Sent postpaid.*

Patriotic Pillow Tops

Your choice of any one pillow top sent Free for a club of two subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year, for 60c. Specify clearly the top you desire.



No. 951

Here is something "distinctly different." Pillow tops, printed artistically in six colors on an excellent quality of mercerized rep. The tops are 21x21 inches. The prominent feature in each of these tops is "Old Glory" in natural colors and an appropriate motto. A pillow covered with one of these tops would make a very attractive gift, one with a patriotic appeal. Be sure to mention top you desire. *Sent postpaid.*

Patent Lamp Burner

Sent Free for a club of two yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year, for 60c.



No. 811

This lamp burner is so constructed that it burns much less oil than the ordinary burner, yet it gives a much brighter light, clear white, about 30 candle power. It takes a No. 2 flat wick, one inch wide and standard No. 2 chimney. Guaranteed to please. *Sent postpaid.*

Dainty Silk Scarf

Sent Free for a club of THREE yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year, for 75c.

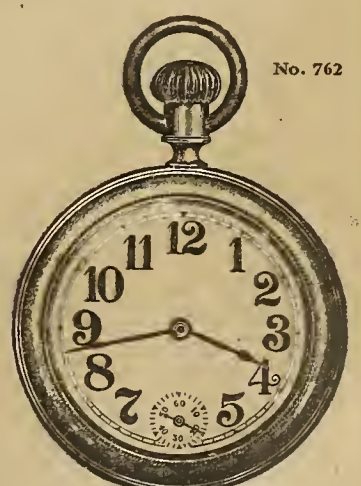


No. 777

This elegant silk scarf is one of the most fashionable articles for ladies' wear. It is 24 inches wide and nearly two yards long. This scarf is made of a superb quality of silk and can be had in the following colors—light blue, pink, lavender and white. Very becoming and gives that "chic" appearance so desired by the fair sex. In ordering be sure to specify color desired. *Sent postpaid.*

An Excellent Watch

Sent Free for a club of FIVE yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year, for \$1.00.



No. 762

Here is a good reliable watch that will stand rough usage—just right as a gift to that boy you have in mind. 18 size. Polished nickel case, stem-wind, stem-set, open face, white dial. We guarantee it against defects in material or workmanship. If it doesn't please, send it back. *Mailed postpaid.*

THIS COUPON MUST BE SENT WITH YOUR ORDER

Nov. 20

These Offers Expire on Dec. 10

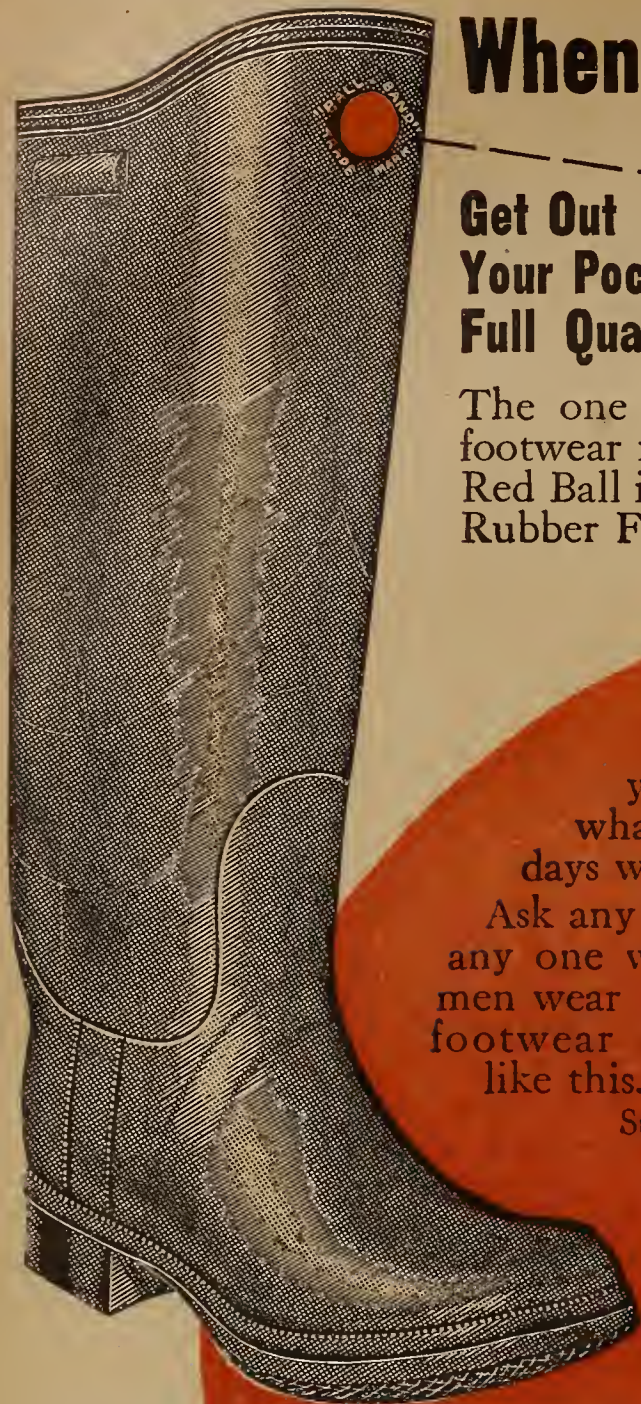
To insure the prompt handling of your order it is absolutely necessary that you clip out and return this coupon. If you send a club, write names and addresses on a sheet of letter paper and pin the coupon to same. If you send only your own renewal, use the order form below. Remember that order must be mailed before December 10, 1915.

Name

P. O. R. F. D. State

Premium desired

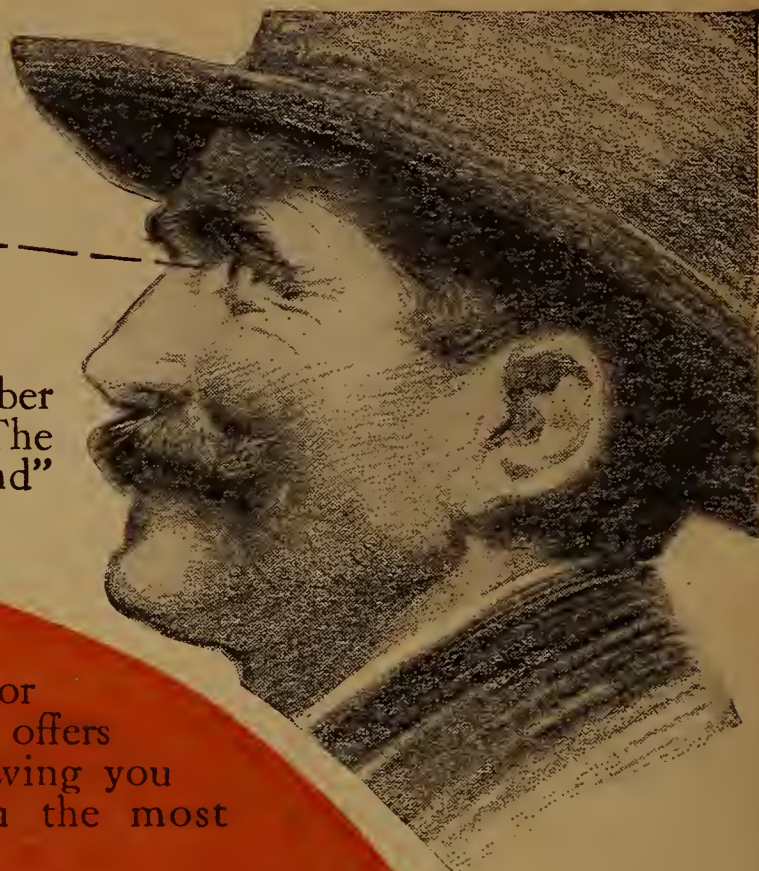
Address Orders to FARM AND FIRESIDE, Springfield, Ohio



When You See That RED BALL

**Get Out
Your Pocketbook—It Means
Full Quality For Your Money**

The one sure way to tell about rubber footwear is to look for the Red Ball. The Red Ball is the Trade Mark of "Ball-Band" Rubber Footwear.



When you ask a merchant for rubber footwear and he offers you "Ball-Band," he is showing you what he knows will give you the most days wear for your money.

Ask any man who wears "Ball-Band" Footwear, or any one who sells it. Over eight and one-half million men wear it and over 50,000 merchants sell it. Ordinary footwear could never create a trade and a reputation like this.

Stay on the safe side and look for the Red Ball. If you don't see it you are not getting "Ball-Band" quality. "Ball-Band," like all quality articles, is being imitated.

The Lowest Cost Per Days Wear

Figure the cost of your rubber footwear on how much it costs per days wear. There's more days wear at a lower cost per days wear in "Ball-Band."

Every part is stronger. Note for instance how much longer the heels wear. They are made of good, strong rubber. All "Ball-Band" Boots are Vacuum Cured. During the vulcanizing, this process causes a tremendous pressure on the fabric and rubber and makes the boot one solid piece.

Our Booklet—"More Days Wear"

tells you how to care for rubber footwear so as to get all the quality out of "Ball-Band" that we put into it. Write for a copy now.

If your local dealer cannot sell you "Ball-Band" Rubber Footwear, tell us his name. We will see that you are fitted.



"Ball-Band" Arctics

**For Men
For Women
For Children**

one, two and four buckles—are made of tough rubber forced into a strong duck fabric. They have tops of best grade cashmerette, and the linings we make ourselves of fine, warm wool. Fine to wear at work or to protect your good shoes. A strong, sturdy piece of footwear.



The "Ball-Band" Coon Tail Knit Boot is *knit*, not felt, insuring utmost wear and service. Ours is the only high-grade knit boot of this character on the market. The patented snow excluder keeps out snow, dirt, grain and chaff and keeps the ankles warm. Heavy gum overs to fit. This boot is completely shrunk; it can be washed when dirty—it simply won't shrink any more. Look for the Red Ball on the straps.

MISHAWAKA WOOLEN MFG. CO.
305 Water St., Mishawaka, Ind.

"The House That Pays Millions for Quality"

The knit
boot
overlaps
the
rubber

From
HERE
to
HERE



"BALL BAND"

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PHOTO BY CLARENCE A. PURCHASE

She Has Paid for a Motor Car and a Kitchen Range

Protect Our Good Name

GOODYEAR
AKRON

Visitors to the Goodyear factories are always impressed with a framed sign which confronts them at every turn.

In every room in every Goodyear building, they encounter the same message: *Protect our good name.*

It hangs on the walls of all the Goodyear branches throughout the country, and is being adopted by tire dealers everywhere as an expression of the spirit in which their business is conducted.

We believe that the public will be interested in the analysis of this simple but striking sentiment which is published herewith.

The Goodyear Tire & Rubber Co.
Akron, Ohio

H. D. Dibelius
President

STRIPPED to the waist, his huge torso streaming with sweat, a workman swings the heavy iron core to an iron table, and wrenches off a tire which has just come steaming from the heater.

His eye falls on the legend over his head, and he smiles.

Our good name is also his good name.

The two are intertwined.

He will protect the one, while he subserves the other.

His thoughts are—as they should be—chiefly of himself, of his little home, and of his family.

Their good name, his good name, our good name—his good work will stand guard over them all.

* * *

Two thousand miles away—in Seattle, we will say—the same thought, in the same simple words.

An irritating moment has arrived—the temptation to speak sharply to a customer, to fling a slur at unworthy competition.

The salesman, or the manager, or whosoever it may be, looks up, and the quiet admonition meets his eye.

Protect our good name.

In a twinkling it smooths the wrinkles out of his point of view.

He is himself again—a man with a responsibility which he could not escape if he would; and would not, if he could.

* * *

Back two thousand miles

again to the factories—this time to the experimental room.

An alluring chance to save—to make more profit by skimping, by substitution. No one will ever know. But—the silent monitor repeats its impressive admonition:

Protect our good name.

What chance to compromise with conscience in the presence of that vigilant guardian?

* * *

Thousands of men striving to keep a name clean.

And keeping their own names clean in the process.

* * *

We Americans, it is said, make a god out of business.

Let the slur stand.

Whether it be true or not—it is true that business is our very life.

Shall it be a reproach to us that we try to make business as good as business can be made?

* * *

Think of *this* business, please, in the light of its great animating thought:

"Protect our good name."

We are thinking of you, always, when we say it—you American millions, and you other millions in the old world.

We think of you judging us, judging us—by what we are, by what we do, by what we make.

We think of tens of thousands of homes in which our name can be made to

stand for that which is worthy and worth while.

We must not lose your good will—we must not tarnish our good name.

* * *

You can call that anything you like.

You can call it business, or sentiment, or idealism, or nonsense.

It may be all of these.

It may even be that which our national critics call making a god of business.

But at least it gives to us a motive that is bigger and broader and deeper than money.

It makes thousands of men happier in their work and more faithful to it.

It has made of this business a democracy of united thought—a democracy of common endeavor—a democracy of purpose and principle.

* * *

And here is the oddest thing of all:—

The more we live up to this "impractical" ideal, the greater the business grows.

The more we labor for the future, the more we profit in the present.

The more we strive for character, the greater the reward in money.

The more we put into our product, the more we take out in sales.

Perhaps, after all, there is more than one sense in which it is good to make a god out of business.

We think so.

And we think you think so.

H. D. Dibelius, President
The Goodyear Tire & Rubber Co.

FARM *and* FIRESIDE

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Published Bi-Weekly

Happiness, Incorporated

How a Money-Making Minnesota Stock Farm is Managed

By ALBERT E. RICHTER



Every department of the live-stock operations is managed separately. The profits prove the wisdom of it

This is the first of two articles by Mr. Richter, telling about the methods used in the management of the McCallum farm. The second article will appear soon



Sheep, along with cattle, hogs, and horses, give the Lismore Farm products to sell often during the year



To give each of the boys something for which he alone would be responsible was the father's plan

OUT on the wide prairies of western Minnesota is an unusual farm—a farm of happiness—eighteen hundred acres of it. From all outward appearances this farm is little different from neighboring farms; but once one has met and talked with the five energetic sons and the four happy daughters of this farm, the great difference from other farms becomes apparent.

At the break of dawn almost any morning, anyone seeking a means to keep the boys and girls contented on the American farm might find one answer if he stepped into the kitchen of the farm house of John McCallum, Bigstone County, Minnesota.

At the head of the big kitchen table sits John McCallum, a big, whole-hearted, broad-visioned Scotchman; president of the Lismore Stock Farm, Incorporated. Around the table sit the vice-president, secretary and treasurer, general manager, and directors. There are nine in all, five boys and four girls, sturdy sons and daughters of the soil. They are the sole stockholders and officers of the Lismore Stock Farm, Incorporated. The farm is under their management, and each and every one of them are children of President John McCallum.

Sixty-nine years ago John McCallum first saw the light o' day at Argyleshire, Isle of Lismore, Scotland. Eight years later he came to America with his parents, who settled in New York State and became farmers. At sixteen John McCallum caught the "Western fever" and started for Minnesota. That was in 1862. At this time the North echoed with Lincoln's call for volunteers. John McCallum, age sixteen, answered with thousands of others. Assigned to the 12th Wisconsin Regiment, this young Scotch laddie served under the immortal Sherman until the end of the war, and distinguished himself for bravery on the famous march from Atlanta to the sea.

Started to Farm Fifty Years Ago

AT THE close of the war Mr. McCallum returned North, laid aside his uniform, and became a farmer in Washington County, Minnesota. Later, in 1876, he and ten of his neighbors went to Bigstone County to locate new land. Here a homestead and a tree claim were staked, and in 1877 John McCallum and his neighbors established Cottage Grove colony. That was thirty-eight years ago. To-day the McCallum farm comprises all of the original Cottage Grove colony except one quarter section of land.

Seventeen years ago the mother of the little prairie home passed away, leaving John McCallum with nine children, the oldest sixteen. Taking stock of himself and his possessions, this soldier-farmer made a mighty declaration that as long as he lived he would keep those children happy and satisfied upon the farm. It seems that he has been successful, for to-day, with one exception, all the children are at home, satisfied, happy, and contented.

"How did I do it?" answered John McCallum. "Why, I just used a wee drap o' common sense. It is only human nature that boys and girls will be interested in something they have an interest in, rather than in that which is only temporary. So I incorporated the farm and gave them each an equal share of stock. For a long time I had studied the problem, and perhaps out of the fullness of my anxiety came the satisfactory solution. I remembered back to when

I was a boy on my father's farm. That was before the invention of modern labor-saving farm machinery. A day's work on the farm was a test for the muscles of a giant. Our grain was cut with a cradle. Most everything was done by hand. What machinery we had was crude and, if bought, expensive. At the close of a day there was little thought of recreation; books were few and far between. Sundays were given over to worship and the reading of the Bible, and there were few holidays, even in winter. There was plenty of work for the body, but little food for the mind.

Why Children Leave the Farm

"SCHOOL was a real pleasure, but it didn't last long enough. No, farm life, when I was a young man, wasn't calculated to be particularly interesting work, mentally or physically, and I am surprised to-day, in this age of efficiency,—a great word that,—to see that on many farms methods of living haven't changed much in the last fifty years. The only difference now is that, when old enough, the children on the farms leave of their own free will and take up other work which allows them both mental and physical recreation. In most cases I can't blame them.

"What I couldn't figure out was why a farm as large as mine could not be operated successfully as an incorporated business, just like a railroad or any other large business enterprise; and nine years ago last spring I decided that as long as I couldn't figure out why this plan wouldn't work I would put it to a test. I had a large tract of fine land and a big family, and



The president of the farm, John McCallum, first saw the light o' day 69 years ago at Argyleshire, Scotland

I wanted to keep both the family and the farm together. I drafted my own articles of incorporation, then I took them to my lawyer for his criticism.

"I had placed a conservative valuation on my land, equipment, and live stock, capitalizing at \$100,000, although I knew my farm and equipment to be worth more. I then issued stock on the corporation to the full amount of the capital, retaining one third, a controlling interest, for myself. Then I called the children together and presented each with a block of stock. I said: 'I want you to know, each of you, just what interest you have in this farm. I have reserved one third of the stock for myself, to pay me for the work which I have done in the past, and it is now up to you to make the farm profit so that each of you may have dividends at the end of each year in payment for your work. It's up to you to make good and to make the farm pay.' That was nine years ago. The boys ranged from twenty-one to twenty-five years, and the girls from thirteen to twenty years of age.

How the Incorporation Plan Works

"HERE was two thirds of \$100,000 safely invested, with dividends of their own as soon as earned. But more important than the dividends, they became part owners of the business, with a personal interest in its welfare and a personal influence in its management. The boys received equal shares of stock, and the girls received equal shares, although the latter shares are somewhat smaller than the former. The first thing my new co-partners did was to call a meeting of the stockholders of the company to elect officers and to form an organization. Considering the fact that I was the principal stockholder, and wished to retire from the active management of the farm, leaving the responsibility for the others to assume, I did not attend that first meeting. I took a vacation. In my absence my children elected their old 'daddy' president of the company; John G., my third son, vice-president; Leslie, the fourth boy, secretary and treasurer; Gilbert S., my second son, general manager; and Morris, the youngest boy, director at large. These officers became the board of directors of the company. William, my oldest boy, just naturally wasn't laid out for a farmer. He was for the law, so I sent him through the University of Minnesota and gave him a quarter section of land in his own name. I didn't like the idea of the family's separating, and I didn't want to break up the farm, so later I bought back William's quarter section and turned it over to the corporation."

The first action of the board of directors was to make arrangements for the management of the farm and its various branches. John McCallum had long since ceased to be a wheat raiser, and had been running live stock on his farm for many years. Cattle, hogs, sheep, and horses were paying annual dividends. To give each of the boys something for which he alone would be responsible, each son was placed in full management of the various branches of live stock. Gilbert, general manager of the farm, was considered best adapted to take charge of the cattle. Morris, the youngest son, became assistant manager of cattle, and was given full charge of the sheep as well. John became manager of the hogs, and Leslie of the horses. Each manager is responsible for the operations of his department and its stock, and is held accountable to the corporation.

The Editor's Letter

At Coolfont Farm, November 15, 1915

SOMEWHERE in the United States there is a woman who wrote me a letter of thirty-eight pages of closely written script, in which she has poured out all her troubles, and to which she will receive no answer.

If I received many such letters per day I could not read them, but I have read this with interest and with a very deep sympathy.

I shall not answer it, however.

I shall not answer it because nowhere in her letter does she mention her address, and I am unable to read the address on the envelope.

There are some traps which fate sets for people, out of which they can be delivered by no force except their own power to meet fate and defy it. Hers is a case of that kind. I could not in any case give her advice which would help. I can only extend to her my sympathy, and that perhaps is as much as anyone could do; but sympathy sent by mail from a distance of hundreds of miles is a pretty cold thing to a woman whose daughter has not only deserted her, but by playing the part of an abused and overworked child has caused her mother to be held up in the news columns of the press as a cruel and neglectful mother from whom her fifteen-year-old daughter has been obliged to flee to the protection of the courts.

I should be sorry to have this woman believe that I could read her letter and absolutely neglect it. Perhaps she will see this and will understand. I cannot give her name because she asks me not to do so. She has had a very troubled life. This daughter she has by a first marriage. Her second husband is a man afflicted with a serious physical disability which has made it necessary for his wife to go about with him and help him in business matters. Her eldest daughter has been left a good deal in charge of the younger children, but that she was overworked or in any way ill treated is something which her mother certainly never intended, and which a contented and happy girl would never have thought of.

I see in this letter a deep lesson for all parents, in city or country. This girl became alienated from her mother by the poison tongues of tale bearers, bearing tales with reference to her mother's early life. She was a stepdaughter in the family and not a child of both parents of her younger brothers and sisters. In thousands of cases this situation has set off one member of the family from the others, and set in motion those secret movements which have wrecked lives. The girl is evidently high-spirited; she is also a little vain, and the home is rather a poor one. The farm is mortgaged; it even has a second mortgage upon it, but I am convinced from the description of the agricultural methods and the equipment which these people have mortgaged their home to buy that if the spirit of the family can be enriched by happiness and content the farm would eventually bring prosperity also.

There came a time when the husband went away and left in the hands of his wife the whole control of the farm. The foreman was disagreeable and she discharged him. Then she tried to do his work as well as her own.

She called upon her daughter to help her, and in so doing laid upon the girl burdens of work which would have been light to a contented and happy girl but were very heavy to one who was dissatisfied and unhappy in her home and who was filled with criticism and rebellion.

The next morning the girl's bed had not been slept in. A note which she left seemed to threaten suicide. The streams and ponds were dragged but no body was found, and in the midst of illness, weariness, and toil this mother was informed that her daughter had appeared in a near-by city and there had been taken charge of by the juvenile court as a child whose parents had driven her from home by cruelty and hard work.

All these things were printed in the papers. The husband returned to find his wife ill, partially from inevitable causes and partially from the shock of her daughter's disappearance, and the almost equal shock of her reappearance in what she regarded as a disgraceful suit in court, in which her reputation had been entirely swept away.

Mother Worked for Her Daughter

"I WORKED very hard," she writes, "and spent many hours far into the night laboring and devising ways and means to have the amount my daughter wanted each week. She wore white underclothes, all ruffled and embroidered, and still I now hear we furnished her no clothes. I have here now two good wool dresses for school and one wool dress for home wear. She had three silk dresses, but left only one here; the other two she took away. She had three white petticoats she took away, and I have two of hers here. She left her winter underwear and took three sets of summer underlingeries. She left four fine white waists, batiste embroidered and finished lovely; two white dresses, four gingham dresses—pink-checked, blue-checked, tan-checked, and red-checked, a dark blue wool middie, and a peacock blue cotton middie. She wore a navy-blue broadcloth skirt with these waists. She had two tailored coats and one long coat (two years old). She has a linen dress and four others that could have been lengthened, but I did not think she needed any more dresses, so refused to make them over or make up three new dresses—one red serge wool and two ginghams. She made two

dresses in school and a good deal of underclothing. She did fine work on all these pieces she made in school."

Rather tragic it seemed to this woman to have the court take charge of her daughter as abandoned when she had left a home in which so much was done for her, not in money perhaps, but in devotion.

This mother and this daughter were separated by two things: First, that lack of ability to live close to each other which is found in so many families. It is perhaps the most destructive thing in the world in family life. They lived apart, therefore it was easy for gossip to drive them farther apart. Finally, the girl felt that she could stand it no longer. She must leave, and when she left she had a running-away to justify. She had to play a part. She left most of her nice clothes at home in order that she might be destitute. The hard work which she had been asked to do was made in court to appear terrible. The net result—a broken-hearted mother.

Well, what's the good of all this? There is good in the close study of any human tragedy. Pointing out



Mr. Berryman says there is no secret to his success except careful attention to details

the good in it, however, is not for me. I am sure that I can give this woman no advice which will benefit her. That is about what I should have written had she not been so agitated as to leave out her address; but I shall be greatly mistaken if there are not some families visited by FARM AND FIRESIDE in which it is worth while seriously to contemplate the evils of living apart and the harboring of grudges and the nursing of grievances and the permitting of gossip to come between those who should not be separated.

Herbert Quirk

Credit for Home Work

THE public schools of Poughkeepsie, New York, for two years have been giving school credit for home work. This plan has proved so successful in educational value and in popularity with parents that it is coming into use in other places, one of which is a country school near Springfield, Ohio.

Every Friday afternoon each child takes home a home-duty record slip. Beginning with Monday, all the time spent by a pupil in home duties is entered in the proper space. At the end of the week the card is signed by the parent or guardian and returned to the teacher.

These home-duty credits count as much in the pro-

OUR NEW SERIAL STORY



He fell in love with her picture

IN THE next issue THE BAITED TRAP will begin. This story is by Edwin Baird, that favorite with FARM AND FIRESIDE readers. He pictures the life and adventures of two young men. One of them fell in love, desperately in love. His fortunes and his misfortunes will interest you. Begin to know Bob Yates with the Christmas issue of FARM AND FIRESIDE.

motion of a pupil as any regular subject in the school.

Among the duties for which school credit is given are dish-washing, house-cleaning, preparing meals, work in the garden, shoveling snow, washing, ironing, and mopping, care of animals, sewing, newspaper route, helping in store, caring for the sick, and many other duties. Practicing music lessons, one of the duties sometimes shirked, is on the list. Care of automobiles is there too. Any other duties which the parents think important can be added to the list, and the child receives credit.

This branch of education is not simply an extra to school work. It is so much a part of the school work that the pupils are not promoted at the end of the year if they fail in their home duties.

Living from Bees

Apiary of 250 Hives Nets \$3,000

By H. T. DOBBINS

TO a friendly impulse to help out an old neighbor who had fallen upon evil times and was compelled to move away, Bell E. Berryman, a retired business man of Merrick County, Nebraska, owes the possession of the largest apiary in his State, and the control of a most profitable business. Failing health had compelled Mr. Berryman to quit business, and the loss of his wife had left him a lonely and prematurely old man.

Last year Mr. Berryman marketed 20,000 pounds of honey, at an average price that meant over \$3,000 for his year's pleasant work. Not only did he derive a fine income from his apiary, but he has drawn from it a draft of healing tonic that has completely restored him to health. Retiring from his store at fifty-four years of age, with apparently a brief span of life left

to him, as a result of too close attention to indoor affairs, he is to-day perfectly well and happy.

Chance was so strong a determining factor in starting Mr. Berryman into the business of beekeeping that it lends an unusual interest to his story of success. After he quit the store he found much leisure was left upon his hands. Much of this was devoted to his fruit, flowers, and vegetable garden. One morning a swarm of bees hovered about a plum tree in full bloom. Interested, he watched them in their maneuverings, and after they had alighted he turned an empty cracker box over the swarm and then hurried off to borrow a hive from a beekeeping neighbor. All during that summer he watched over them.

The death of his wife caused him to decide upon closing his home in the city and going north to live with a daughter. He disposed of the bees to the neighbor. A year later business called him back to Nebraska and, his daughter's family following later, he again took up his residence in the town. One day the neighbor who had purchased the bees came to him and said that circumstances forced him to leave, and would Mr. Berryman buy back the bees, along with the two swarms he owned.

"I bought them," relates Mr. Berryman, "merely to accommodate an old friend, with no thought of the possibilities of the bee as a business for a man of my years."

"I bought several bee books and subscribed to the journals that devote special attention to the culture of honey. My colonies flourished. Much leisure time was on my hands, and I found the investigation and study of the wonderful little creatures the most fascinating pursuit I had ever known. I was soon absorbed, and my interest grew with my knowledge. I read every authority on the subject of apiculture."

"The upbuilding of an apiary seemed, in a measure, thrust upon me, and since I continued to give careful and painstaking attention to every detail of the business it could not help prospering. I found people all over the country were trying to keep bees, and the great majority of them failing dismally because of lack of knowledge and intelligent care."

"In my own county there were dozens of farmers who had but a hazy idea of how to make bee culture profitable. There was no local source of bee supplies. My farmer friends usually waited for the bees to swarm before they hunted for hives, and wondered at their small store of honey. I became, through ordering supplies for myself, the outlet for the growing demand of these men for apiary appurtenances. My apiary now contains 250 strong and vigorous colonies, and prior to the last season, when Eastern firms bid for my entire output, I found a ready market in the larger cities of the State for my select comb section honey."

The Berryman apiary is located on 16 acres of desirable ground in the suburbs of the town, where it was removed after the owner had become aware of the profitable character of the business he engaged in merely as a pastime. All of the work is done by himself.

"I have done nothing remarkable," he said. "Any man in ten years can do as much. The story of my success is the same old plain, unvarnished tale which has been told of all successful ventures—a small beginning, diligent research, painstaking endeavor, and a careful consideration of the most minute and sometimes seemingly unimportant details."

More Pork from Corn

With Self-Feeders Hogs Make Bigger, Cheaper Gains

By A. M. HONNOULD

A CAFETERIA, or self-feeding, plan by which hogs make greater gains in a shorter time and at a less cost than when fed by a feeder, no matter how experienced and first-class he may be, is announced by the animal husbandry department of the Iowa State College of Agriculture, with a long record of experiments to back up the claims.

"The only objection to the plan is that it shows that the hogs have more sense than the scientists," declared Dean C. F. Curtiss, announcing the matter. It does, indeed, prove that the hog is not the hog that he has been held up to be. While he does not choose his food with any regard to price—looking down the left-hand side of the menu rather than the right-hand side, where the prices are set forth—he does choose it with regard to the greatest gain to himself in a perfectly balanced ration which surpasses anything the scientists have ever discovered. "Truly, the hog does not like hash any more than does the average human being," says Prof. John M. Evvard, who devised the self-feeder. Hash-fed hogs, even when given the best of care, do not do as well as self-fed hogs, which make gain enough to offset the epicurean taste which passes by a hash of cheap feeds and gorges on the higher-priced morsels.

The results of a few experiments carried on within the last year at the Iowa State College show the financial benefits of the cafeteria plan for feeding hogs.

A comparison of pigs, hand-fed versus self-fed, taken from weaning to 250 pounds in weight, on alfalfa pasture and finished in dry lot when the alfalfa season was over, is particularly instructive. The pigs which were hand-fed on both corn and meat meal consumed a total of 385.4 pounds of feed for 100 pounds of gain. The pigs which were self-fed on the same materials consumed only 364 pounds of feed—or 21.4 pounds less—for 100 pounds of gain. The cost of the 100-pound gain when the pigs were fed by hand was \$3.96; when self-fed it was \$3.83, or 13 cents less. The return for a bushel of corn, with \$6 hogs, was 79.6 cents for the hand-fed pigs and 83.9 cents, or 4.3 cents more, for the self-fed. Summing up the experiment, Professor Evvard made this statement:

"Peculiarly enough, the self-fed hogs getting corn and meat meal in separate feeders made the largest and the cheapest gain, finished to 250 pounds quickest, and returned most for a bushel of corn. This bunch at eight months of age weighed 250 pounds, and were finished and off to market twenty-six days before any of those from other fields were ready at that weight. The test proved that the self-feeding of corn and meat meal in separate self-feeders is practical and economical on alfalfa. Considerable labor was saved in self-feeding, and risk, interest, and responsibility were lessened by having hogs ready for market earlier."

A quick thirty-day finish was put on two groups of sixteen 265-pound hogs, corn being fed in self-feeders in two lots, the first of which was fed tankage as a slop, and the latter self-fed dry. The results were close, but the advantage was invariably with the self-fed supplement. Five pounds less of feed was consumed per 100 pounds' gain by the self-fed lot, while the cost per hundredweight was seven cents less.

In fattening old sows for market the self-feeder trials proved exceedingly satisfactory. For instance, two groups of yearlings, weighing 261 pounds when started, one hand-fed, the other self-fed on shelled corn, made gains of 2.30 and 2.64 pounds daily, respectively. The hand-fed ones took 436 pounds of corn for each 100 pounds' gain, the self-fed ones but 417 pounds; the profit per hog in fifty-eight days, corn costing 50 cents and hogs selling for \$6, was \$2.77 for the hand-fed and \$3.42 for the self-fed, a difference of 65 cents. Professor Evvard adds this interesting comment:

"It was shown strikingly that for such mature hogs the self-feeder for short feeds is very profitable. Other feeding records show that these old sows had more judgment as regards the amount of supplement they should have than their feeder, experienced and first-class though he was."

Self-Feeder Proves Its Worth

THE advisability of using the self-feeder in the fattening or finishing of yearling hogs was determined by tests with 64 head of 225 pounds, divided into eight lots and fed on various plans. The self-fed hogs receiving corn as the lone grain, when compared to those hand-fed, did much better. In other words, the hogs which were self-fed made more rapid gains—2.05 pounds daily, compared with 1.87 pounds, a difference of almost 10 per cent; required 20 pounds less feed for 100 pounds' gain; cost 22 cents less per 100 pounds' gain, and made 61 cents more profit per head than where hand-feeding methods were followed. Surely, this demonstrates that the old-time method of hand-feeding is clearly excelled by the self-feeding scheme. The hog has more sense than he has been given credit for. Professor Evvard pointed this out in his comment

on the self-feeding plans and the hog's ability to pick out a well-balanced ration for itself, in this manner: "In recent times we have come to appreciate that swine do well when allowed to choose their own feed, hence we have the development of the forage-crop system, the hogging-down system, and so on.

"The forage-crop system of summer swine production is most excellent because of one big reason: namely, that the hog has some opportunity to balance his own ration. If the pasture be alfalfa, or rape, or red clover, he can eat much or little of it, and in this way vary the proportion of 'side-dish' protein, which he eats along with the corn which is thrown over the fence to him. If both corn and high-protein pasture are supplied at free will, then he has even a greater opportunity to make his ration efficient. Of course when the pig runs out on forage he can eat of the soil; this is of advantage in that complex mineral substances are supplied thereby. Of all the systems of 'swine production in the summertime' the forage-crop system is the most economical under present existing commercial conditions.

"Hogging-down corn is nothing more nor less than a self-feeding system, and a most natural one at that. If the hogs are allowed free access to rape in the cornfield, with possibly alfalfa alongside, then the scheme becomes a 'cafeteria' one in that the hogs have a choice of several feeding stuffs. Corn is hogged down successfully in every corner of the country; as a self-feeding scheme hogging-down is a great physiologic and economic success.

"Many of you believe that swine know more about how much water they should drink than men do, hence you allow it at free will. You have faith in the hog's ability to balance his liquid ration. So, too, many of you supply salt at free will, thinking that this is the best way; and from the experimental data we secured at Ames recently it would seem that your thoughts are about right in this regard. Then again, thousands of feeders place such condiments as these before swine: limestone, cob charcoal, slacked coal, wood ashes, and others—with the faith that the pigs will mix these in with their daily diet in much more economical fashion than when these are mixed with the feeds and 'doped out' as so much unwelcome hash. Truly, the hog does not like hash any more than does the average human layman.

Hogs Choose Feeds Well

"NOW, it is a peculiar commentary upon the good judgment of feeders that they should have utmost faith in the hog as regards his ability to choose some feeding materials but yet should hesitate to trust him with grains, usually high-priced, such as corn, oats, tankage, meat meal, oil meal, and others.

"Man himself is a self-fed animal; this has been true since the average man's earliest recollection. You have made the 'Dairy Lunch' or the 'Cafeteria' system of eating popular by your patronage simply because it was efficient in administering to your needs. You have believed soup to be an appetizer, and uniformly eat it at the beginning of a meal. Science has



The originator of the hog-cafeteria idea and inventor of the self-feeder is John M. Evvard of Iowa

shown that you are largely right in this. Disregarding expense, you prefer the *à la carte* method to *table d'hôte*, because in the former you choose and in the latter you do not. You do not relish hash even as a side dish ordinarily, hence why should you expect swine to relish it as the one and only dish?

"Surely, appetite is governed by the state of the bodily needs. Appetite has been defined as the desire for food based upon the resultant of past experiences. There is much truth in this. Of course we must remember that even though appetite is a reliable guide as regards bodily needs for feed, the hog which manifests it is using as a basis physiology, and not economy. The hog is a physiologist, not an economist, therefore he chooses his feeds regardless of their monetary value."

Nets \$860 Profit

Iowa Hog Man Likes Self-Feeders

By SEWARD L. SMITH

A YEAR ago this spring I found myself supplied with 200 pigs from 25 sows. I felt that it was a large number for a 117-acre farm. I had read several articles about feeding hogs with self-feeders at the Iowa Agricultural College and, learning of the excellent success they had had, I determined to try the same plan of feeding. So I had a carpenter make the self-feeder. It was 16 feet long and 3 feet wide. Two feet were partitioned off at one end for tankage. The feeder held eight sacks of tankage and about 100 bushels of shelled corn. One side of the roof was hinged, making a door to shovel corn in. It was furnished with slides which could be raised or lowered to regulate the feed. It is built on two 4x4's, which form skids so that I hitch the team to either end to pull it around. Platforms are attached by hinges, and can be hooked up when moving the feeder.

I placed the feeder on top of a hill at the farther end of a 20-acre pasture, and built a board fence around it to keep cattle and large hogs away.

I sold the three youngest litters and raised 160 with the self-feeder, keeping shelled corn in it until October 1st. I commenced feeding new corn about September 1st, and by October 1st had them on a full feed of new corn. The new corn I scattered in the pasture a load at a time, except while they were hogging, and fed them down corn that way until marketed, except on real stormy days, when I hauled shock fodder into their sleeping quarters.

I kept tankage in the self-feeder until they were marketed. It was very interesting and suggestive to notice how they consumed the tankage. It went very



The old-style plan of fattening hogs may prove to be obsolete. Experiments point that direction

slowly until the pasture commenced to dry in July, and from then on, until about November 1st, they consumed considerable. At that time I turned them into a cornfield in which rape had been sown at the last plowing. Very little tankage was consumed after this. At the present time 140 self-fed hogs on rape pasture, some of them weighing over 150 pounds, are only consuming 200 pounds of tankage a week.

The following is my expense account on the 160 pigs raised:

3,000 lb meat meal @ \$48 per ton, from June 1st to Sept. 15th.....	\$ 72.00
4,000 lb meat meal, from Sept. 15th to Jan. 30th.....	96.00
600 bushels old corn @ 65c.....	390.00
470 bushels new corn before hogging down @ 55c.....	258.50
8 acres hogged down @ \$25.....	200.00
900 bushels after hogging down @ 55c.....	495.00
3 acres shock corn for bedding @ \$20.....	60.00
	\$1,571.50

This includes feed for the 22 old hogs from June 1st until January 30th. Seven of the poorest were fattened (weighing 450 pounds a head) January 30th.

I have not included in these figures the several hundred pounds of skim milk nor the cost of pasturing. Neither have I figured the cost of feeding the sows up to June 1st, nor the difference in the price of the sows between this year and last.

I believe these items are:

153 hogs weighing 240 pounds per head, at \$6.50 a hundred.....	\$2,386.00
5 butchered for home use.....	46.00
	\$2,432.00
Expenses	1,571.50
Profit	\$860.50

Two hogs were lost by death, but this item was more than balanced by the increased fertility of the 20-acre field in which they were fed. This field was planted to corn May 31st and June 1st, and grew even and larger than most fields in this locality which were planted in April or early in May.



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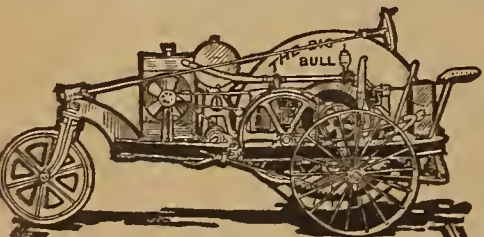
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"How I Fought My Fire"

THIS is a page of fire-fighting stories, all written by FARM AND FIRESIDE readers. It is the result of the contest to "Tell about Your Fire." The first prize of \$5 has been awarded to H. R. Muller of Indiana, and second prize of \$3 to Mrs. W. M. Arrowood of North Carolina.

Vigilance, Forethought

By H. R. Muller

I HAD two large stacks of rye to thresh, and as I had only one place to put the straw, there was little choice as to the position of the engine, which had to be set about 40 feet north of the barn. Unfortunately the wind blew hard in just the wrong direction. We had been firing with wood, and as the straw was long and tough it took a lot of power. But we made good time and were about two thirds through by dinner time. When the bell rang, the men put their teams in the barn and fed them. The barn had a low shed roof covered with old shingles, filled with hay and some shredded fodder left over from the winter before; and with the big stack of new straw built against it on the west end it was certainly an ideal place for a big fire.

A large corner crib stood 25 feet south of the barn, and a woodhouse 30 feet south of that, with our dwelling 15 feet south of the woodhouse, all buildings covered with dry shingles and directly in line with the wind blowing over the barn.

As I had never failed to have several buckets of water distributed around in convenient places at threshing times, so now I had six buckets in different places in plain sight, which no one was allowed to use for any purpose except for fire.

The men prepared for dinner, and sixteen went to the table. The eatables were passed around and almost every man had prepared his plate ready to begin eating. Then I heard my wife, who was on the porch, call "Fire! The barn is afire!"

I ran for the nearest water bucket, a large wooden candy bucket, and was soon on my way with it to the barn door. Was I too late? Eight head of horses in the barn, a valuable bull, the grain, the threshing outfit, corner crib, and home just bought, and heavily in debt, and the strong wind. These were some of the thoughts that flashed through my mind when I reached the open door and there saw the flames leaping high up under the roof and fiery embers already falling on the dry fodder only three feet below the flames.

The horses! I partly set down my bucket—but no, I will try. With the call to "bring those two buckets by the crib" I sprang into the low mow and carefully threw one half of my water against the flaming roof with a spreading throw that put out the fire at once, and the water dripping down put out the fire in the dry fodder. Another bucket of water finished the job completely.

Hardly more than ten minutes had elapsed from the time that I heard the cry until the men were going back to the house to finish their interrupted dinner. When the cry of fire was uttered, some of the men thought it a joke, but every man ran out, only one stopping to grab his hat. It is remarkable that each man went to the place previously occupied, without a single word being uttered, and finished the meal.

I went around the barn, refilled the water buckets, took one with me, and climbed up on the roof, where I sat down in meditation. "That was a narrow escape," I thought. "Could we have saved the horses, or the threshing outfit, or the house?" Well, fortunately we had some insurance. What if my wife had not been so eternally vigilant; if I had not had the water ready in a convenient place; if I had not been able to reach the fire from the inside so as to use every drop of water to the best advantage? Well, there might have been a different story to tell.

"In the future I shall use only coal to thresh with." I took a look at the insurance policy. Horrors! It had expired!

Small Boy a Hero

By Mrs. W. M. Arrowood

ONE cold frosty morning in December my husband was away from home. My two small boys, aged ten and twelve years, had started to cut wood when the oldest saw the house was afire. He called to me and I went out and looked. You may be sure I was badly frightened, but I knew something had to be done at once. So I sent my ten-year-old son to neighbors for help.

Just about all our earthly possessions were in that cottage, and I said to my twelve-year-old son, "Roy, do you think

you could climb that steep roof with a bucket of water and pour it on the fire?" Although I was excited, I did not let him know it. "Yes, Mama," he said, "I believe I can."

Then with my help he climbed on the roof of the house. I brought him a bucket of water and he would take it and climb to the top and throw it on the fire, and I would be ready with another bucketful as he would come for it.

Finally he said, "Mama, we can never put it out; the blaze is going underneath the boards." Then I thought if I were only up there I could pull some of the burning boards off. So I said to him, "Son, see if you can pull some of the boards off."

It seemed that he was endowed with superhuman strength, for no sooner had I spoken than he took hold and pulled with all his might, and soon there came to the ground a bunch of boards all ablaze. When he saw it was going to work, he tried the other side, and off they came.

He pulled the two upper courses off until you could have pitched a small table through the hole in the roof. Then I carried more water for him.

When help came we had the fire out and my brave little son was standing there hot and tired, like a regular fireman. One of the men climbed up to see if he had got it all out; that was all they had to do now. If I had waited for them to come it would have been past saving.

Wet Blanket Saved Crop

By G. Slavens

IT WAS late in autumn when a sage-grass field caught fire just over the fence from my corn crop. As it was a very dry season, the fire spread rapidly and my whole crop was in danger, also my buildings. The fire started from a neighbor's clearing. A strong wind was blowing and the fire was soon beyond control. Several men came to help me, and we tore down the fences to save the buildings. But all our efforts to check the fire proved unsuccessful until some one suggested this method:

A large blanket was soaked with water; then two men on horseback took opposite ends and dragged it across the field, and back again in front of the fire. This was on the side next my crop and buildings. After the grass was wet it would not catch fire easily, and we had no trouble to put it out.

To prevent this fire I should have had furrows around my field and buildings, three furrows to protect a crop and ten to protect buildings.

What Saved Our Barn

By Alice S. Allyn

ONE pail of water standing at the foot of a ladder leading to the hay-mow saved our barn.

Lightning struck the barn, killed two calves, then ran along to the top of the haymow. My husband grabbed the pail and ran up the ladder in time to put out the fire, but if he had had to wait to draw that water it would have been too late. So if full protection is not possible, don't neglect to keep a few pails of water handy.

Lived in a Granary

By A. W. Wooley

A FEW years ago, in March, I was working some distance from my house when a snowstorm came up. I left my work and started homeward. When I got in sight of my house the roof was in flames, a spark from the chimney, I suppose, having set it on fire. I ran to the house. My family were busy getting dinner. I told them to get all of the buckets and help me save our home. They were astonished, as they did not know it was on fire.

We worked heroically to save the house, but to no avail. When the roof began to crumble I thought of my money up-stairs in the bureau, but could not save it. We saved only a few things on the ground floor. Our vegetables, canned fruit, and meat in the cellar were all consumed in a few moments.

We were homeless, in a strange land, for we had just moved from the North down here in Maryland. There we were,

my wife and eight children; no money, no clothing, except what we had on, and nothing to eat, for all of our provisions were gone. Neighbors seeing the fire came to our rescue and loaned us some blankets. We went to our granary and hung some blankets over the cracks.

Our friends later helped us to build another house. After we moved into it I was sick with fever for eight weeks. Two weeks after I recovered, my wife was stricken down; then the two girls, and soon the two boys. I hustled for some nurses and a doctor. He said our fever was caused by occupying the new home before the plaster had dried sufficiently.

We came through without one being lost, but I can never forget those trying times.

Don't Cover Your Head

By Mrs. O. W. Walker

I HAD the habit of baking bread at night, and one evening I was pretty sleepy by the time I took it out of the oven, so sleepy that I did not even look at the fire.

During the night a coal must have dropped from the stove to the floor. About four o'clock in the morning I smelled smoke, but my husband said it was only the brooder lamp smoking. We had the brooder with a few chicks in a back room up-stairs. I turned down the lamp and went back to bed, and to keep from smelling the smoke foolishly covered up my head. In the meantime the coal had burned all the way through the floor, and a draft coming up from the cellar helped things along amazingly.

At last my husband, beginning to think that it was not the brooder lamp after all, went down-stairs to investigate, and when he opened the stairway door was almost choked by the smoke. His first impulse was to open the outside door, but a second thought told him that it would be the means of fanning the fire.

I have not told you that we always kept two large buckets of water at the end of the kitchen sink, in case of emergency. In this emergency they were valuable indeed, for the fire had not as yet gained much headway and the two buckets of water put it out.

This is mostly a story of what might have been if we had lazily stayed in bed ten minutes longer, if my husband had opened the door wide, if the water had not been handy; then our little home would have been past saving. Therefore, my advice is that housewives get their bread baked in the afternoon, and that the goodman always have water ready where he can put his hands on it; and, last but not least, when you smell smoke find out where it is coming from. Don't cover up your head.

Farmers' Fire League

By Helen Browne

AT OAKDALE, a rural district in California, the frequent forest fires were a constant menace to settlers. It was a well-timbered section, and owing to its beauty, campers were numerous during the pleasant weather.

One fall, after an unusual amount of destruction had been caused by fires, the Farmers' Fire League was formed. A social was given which everyone attended, and the first funds for the society were raised. Axes, long-handled rakes, and hoes, besides other implements, were procured and distributed at the various small shacks built as fire-fighting stations in convenient places. On a high hill they established a "lookout" and the simplest of telephone systems, also a comprehensive code of signals. At the first appearance of fire, notice was given all along the line and the league members from far and near rallied at the danger points. When necessary, day and night brigades were formed.

Year by year the league has grown in efficiency. Since its beginning in the autumn of 1912, losses by fire have been comparatively small, and there is a feeling of security which was formerly absent.

Bossed the Bricklaying

By W. R. Hale

IT WAS this way that our fire didn't occur. Ninety per cent of dwelling-house fires come from defective flues; so when our chimneys were going up I stood over the bricklayer and saw that every joint was filled with mortar, instead of being left with just a slap of mortar at the edges, likely to drop out and leave a passage for sparks. All my stove flues were built from the ground, and I secured a lower rate of insurance than can be had with hanging flues.

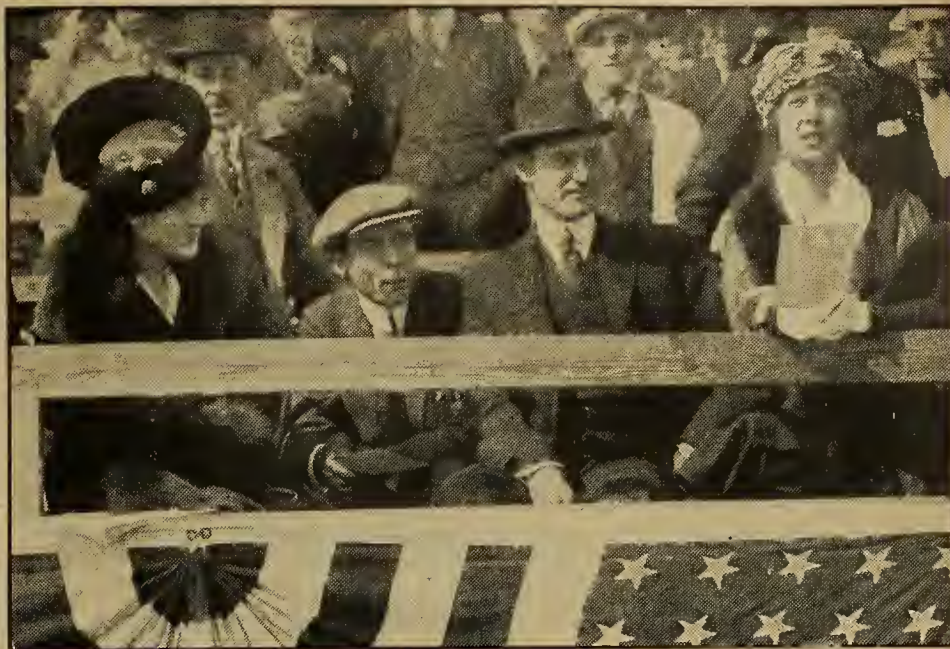
The exits of my chimneys and stove flues are covered with wire netting to arrest sparks which might ignite the roof. We also keep a chemical fire extinguisher ready, so that a blaze can be put out as soon as it starts.

Before the Public Eye

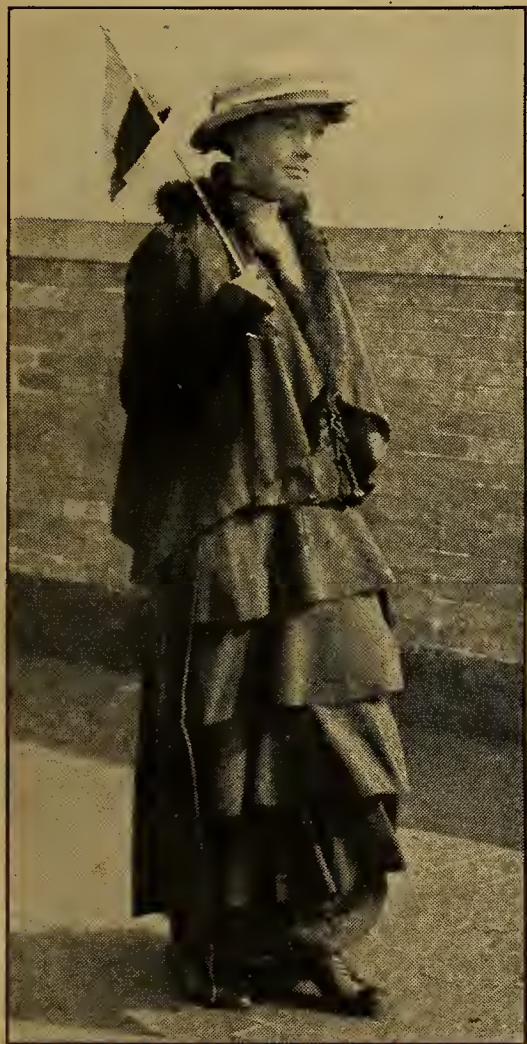
Men and Women at Interesting Work and Care-Free Play



Wearing a patriotic necktie may ease the mind of an Englishman who hasn't enlisted, but it doesn't help the men in the trenches. The ties are tinted with a color-spray pen



That the same things don't interest women which interest men is shown in this picture of Mrs. Mitchel, Vincent Astor, Mayor Mitchel, and Mrs. Astor at an automobile race



Whether it was a protest against this "Votes for Women" hat or the cause—New York voters defeated woman's suffrage recently



This is Mrs. Norman Galt, who is going to marry President Wilson. When? That is a White House secret



You would smile and beam your best—wouldn't you?—if you were with your fiancée, and at a world series ball game



You are wrong if you think this is a view of an old ladies' home. This shows the popular outdoor sport of the elderly Belgian women—making Brussels lace



The motto of these London, England, salesgirls, whose lovers are at the front, is "You never can tell." They are learning the art of shooting up the enemy

FARM and FIRESIDE

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responsible and honest people, and that its subscribers will
receive fair and square treatment.
Advertising rates and regulations furnished upon request.

HERBERT QUICK, Editor

December 4, 1915

Spare That Tree!

BRYANT said: "He who plants a tree
plants a hope!"

If that be true, he who needlessly kills
a tree blasts a hope. He may not know
what sort of hope it may be, either.

More than fifty years ago a gang of
laborers were digging clay for brick.
The brickyard came up to the line of a
bit of land owned by an elderly man.
Just inside the line grew a little scrubby
elm tree, nibbled off by the cattle, and
trying to survive under adverse condi-
tions. But the old man saw in it a
hope—for shade, for beauty.

"Don't dig so far under it," he begged.
"Leave a little ground for the young
tree to grow in!"

This sounded absurd to the clay work-
ers. The idea of any man's feeling so-
licitous about a mere tree—and espe-
cially a chewed-up, scrubby elm like that!
But the old man still pleaded.

"It won't take ten cents' worth of clay
from you," said he, "and think of what
that tree may be in the future. It will
make shade for the cows and the sheep.
People may lie under it, and children
make it their play place. Leave it a
place to stand and grow!"

The old man is long since dead. But
a little boy who was carrying water to
the men heard and still remembers the
story of the sparing of the little elm
tree. Now it stands in a city. New
homes are building all about it. It is
a thing of beauty. The street has been
curved so as to spare it, and the con-
crete sidewalks built around it. It
stands in Springfield, Ohio, and here is
its picture as it looks to-day. The result
of the pleading of an old man with a
vision, and a blessing to unborn genera-
tions who will not know the history of
this tree.

Supporting the New Road

PERHAPS the worst thing which
could happen the cause of good roads
would be the building of all those now
needed, with no provision for keeping
them up after their completion. No
"permanent" road is permanent in the
sense of not needing repairs and upkeep.
We have shown in these columns that a
concrete roadway 16 feet wide can be
kept in condition for twenty years or
more by the expenditure of from \$25 to
\$35 per mile a year. There is probably
no road, permanent or temporary, which
can be kept in really good condition for
less.

Some charge for maintenance there
surely will be on every permanent road.
When issues of bonds for better roads
are voted on, this matter of maintenance
should be provided for.

We are not sure but the "Progressive
Farmer" is right when it says: "Vote
against road bonds or road taxes when-
ever the plans for building the roads do
not include proper provision for main-
taining them after they are built."

Our qualification of this advice lies in
the fact that in many cases the perma-
nent road will be far easier to maintain

by the ordinary tax levy than were the
old unimproved highways. In such cases
the new road, instead of adding to the
local burden, will lighten it.

The Oleo Question

THERE is no good reason why oleo-
margarine should not be sold for
food. But the "oleo" people should not
object to the strictest rules preventing
its sale as butter. It is not butter. It
is not the equivalent of butter as food.

Some scientists of standing may be
quoted to the effect that oleo is as good
a food product as butter. These state-
ments were made prior to or in igno-
rance of the discoveries of McCollum of
Wisconsin. McCollum has shown that
there is a vast difference between the
nutritive qualities of butterfat and the
body fat of animals or vegetable oils.
Young animals, for instance, will not
grow unless they receive in their food a
sufficient quantity of butterfat, or some
other fat (like the yolks of eggs) pro-
duced by the mother for the nourishment
of her young.

The chemist cannot tell some of these
facts from mother fat, but the stomach
can. Oleomargarine is as good a food as
lard, or tallow, or olive oil; but as a



The little tree that was spared fifty years ago

food it cannot take the place of butter.
It ranks with meats, vegetable oils, and
grains. It is not the same as butter.

It should not be colored to look like
butter. To do so is to allow it to com-
pete unfairly. The trade rules for the
color of butter were adopted long before
oleomargarine was thought of. The pub-
lic welfare requires that an article not
identical with it, and in some respects
inferior to it in food value, should not
be sold in such form as to taste like it
and look like it.

The package should be retail size, and
should be marked "Margarine."

The rights of the consumer and the
welfare of the dairy interests demand
this. Oleomargarine as a food is good
enough so that it should not ask the
right to masquerade as better food.

Starting a Rotation

IT IS very easy to say to a farmer,
"Establish a proper rotation of crops."
Doing it is not so simple.

Establishing a rotation or changing
from a poor one to a better one involves
two important things. First, one must
have the better rotation planned; and,
second, he must change his operations
over to the new system. The first calls
for observation and study. The second
requires farming generalship. The man
adopting a rotation is usually doing it
for the first time. His own experience
will not help him much.

Successful farmers who have made
such a change can do many fellow farm-
ers a real service by writing us detailed
statements as to how they worked over
the change, how long it took, what
change was made, and whether they had
to suffer a loss in shifting over.

Learning a New Speech

ON OCTOBER 21st, 1915, B. B. Webb,
at the Arlington wireless station
near Washington, D. C., talked into a
telephone transmitter to H. E. Shreeve
in the Eiffel Tower in Paris, France.
Through the thousands of miles of at-
mosphere, and across the stormy Atlan-
tic, Mr. Shreeve heard Mr. Webb's voice
and understood his words. Not only
this, but Lloyd Espensheid, through a
telephone receiver at Honolulu, also
heard the message and understood it.
Thus, Paris and Honolulu, 8,700 miles
apart, were linked together in conversa-
tion by means of the human voice!

Our capacity for wonder has been
about exhausted by the marvels of sci-
ence, or we should all be aroused to
excitement by this stupendous scientific
miracle. Even as things are, some of us
are thrilled.

What's the good of the conquest of
space by brains? It will do no good at
all for the nations to talk with each
other around the world unless they talk
to better purpose than they have written
and telegraphed.

Never before in history could mind
communicate with mind so easily across
national boundaries. And never before

because in any given bill certain features
are embodied which provide for the han-
dling of farm credit along a certain line,
this by no means implies that there are
not also other methods for granting
credit, but merely that upon the whole
the method laid down would seem to be
the most desirable and effective. In
other words, there are many points in
which bills may vary, the results differ-
ing only in degree.

There are, however, some things which
are fundamental, and upon these a
pretty general agreement should be
reached prior to legislation. A bone of
contention in America has been on the
question of government or state aid.

Prussia instituted a land-mortgage
system about one hundred and fifty
years ago, and France, Austria, and
Hungary, as well as several of the other
German States, more than fifty years
ago. Since then all will admit that enor-
mous strides have been made in material
wealth and in general education.

In studying the European systems we
find that the Prussian *Landschaften*
were formed at the instigation of Fred-
erick the Great, practically, therefore,
under compulsion, but that the State
granted them valuable privileges and ex-
emptions, in return for which they were
obliged to submit to rigid supervision.
In Austria the State, or rather, the indi-
vidual States, went further, and guar-
anteed the obligations of the land banks.
In Hungary a sum of two hundred thou-
sand dollars was granted by the State
(of course, a much larger sum relatively
in those days than now). In France two
million dollars was advanced to the
Crédit Foncier, the French land-mort-
gage bank. These are all instances of
financial aid, without taking into ac-
count the legal privileges and exemptions
to give the obligations of the various
land banks the highest standing, and
thus make them marketable upon the
most favorable terms.

State Aid has Disadvantages

My purpose in this letter, Mr. Editor,
is not to discuss the merits of state aid,
nor to advocate the special lines, if any,
which it should take. What I should
like to point out is that those who urge
some form of state aid—and state aid
has come to assume the special meaning
of a financial obligation undertaken on
the part of the Government in connec-
tion with rural-credit institutions—do
not seem to have carefully looked upon
what may be called the reverse side of
the matter.

Government aid implies and demands
on the part of the Government close and
constant supervision. This inevitably
means that business will have to be car-
ried on with a great deal of what is
known as red tape. If the Government
is to put its stamp, no matter in what
form, upon institutions furnishing farm
credit, it must be not only empowered to
supervise the institutions, but it is its im-
perative duty to do so. It follows that it
will require to have a mass of detailed
information furnished to it by those ap-
plying for loans, and a mass of regula-
tions will have to be complied with,
often involving tedious delays.

All true friends of rural credit ear-
nestly desire that as far as possible it
should be free from politics, so that its
progress should not hinge upon the suc-
cess of any one political party. It can
readily be seen that a close connection
with the Government, which, in accord-
ance with our political institutions, is
always partisan, would make it a very
difficult matter to divorce it entirely
from politics; and, for instance, safety
might demand at times foreclosures on
properties owned by men of influence
which it might be inexpedient politi-
cally to enforce.

The American people are intelligent,
industrious, and self-confident. Our
wealth and resources are very great, and
are increasing at a rate unparalleled in
the history of the world. We possess
great areas of land of the highest fer-
tility. The elements I have just enu-
merated embrace all those out of which
an absolutely sound and independent sys-
tem of farm credit can be constructed.
Time is of course required, and state aid
in some form would doubtless tempo-
rarily help to achieve quick results. The
farmers must not, however, shut their
eyes to the disadvantages that will un-
avoidably attend it, and after careful
consideration must decide for themselves
whether the price is worth paying,
whether, as the saying is, "the game is
worth the candle," or whether they will
rely upon themselves alone and erect,
even at the cost of more time and work,
an independent system of farm credit. It
cannot, of course, be done in a day, as
time will be required before the invest-
ing public fully realizes that the securi-
ties which are being offered them are the
soundest they can buy, but this is bound
to come and their patience will be well
rewarded.

R. B. VAN CORTLANDT,
Vice-President Rural Credit League
of America.

Our Letter Box

What Farm Borrowers Want

EDITOR OF FARM AND FIRESIDE: The
consideration of the subject of better
credit facilities for farmers, the much-
discussed rural credit, may be said, I
think, to have reached the stage where it
is practically generally acknowledged
that, for one reason or another, which
it is not my purpose to discuss here,
agriculture has not been sufficiently
recognized in our banking system, and
that the neglect from which it has suf-
fered must no longer be tolerated. We
are now facing the second phase;
namely, that of deciding what remedy to
apply, what special legislative measures
will best fit conditions in America, and
the habits of our people.

Ex-Ambassador Herrick, as we all
know, was one of the first to realize the
comparative neglect with which our
bankers had treated agriculture, and we
must all take off our hats to him for
that. But it seems to me, after reading
his address delivered before the Mis-
sonri Bankers' Association, at Kansas
City, on May 25th, that he is allowing
himself to become unduly discouraged,
and that instead of being in a boat drift-
ing upon an open sea, as he intimates,
we are simply tacking about preparatory
to crossing the line to the best advan-
tage when the gun is fired for the race.

In formulating legislation there are
naturally many points to work out, and

Your Name on Our List

Little Ways in Which We Watch and Protect It

By DAVID BLAIR

DO YOU know that while you are reading FARM AND FIRESIDE, subscribers in every foreign country in the world—including Greenland and Borneo—are reading it too?

Do you know that if the fire-proof buildings in which FARM AND FIRESIDE is printed were entirely destroyed you would get your next copy with less than a week's delay?

Do you know when your copy is perhaps a day late that the first one intended for you was run over by a train and that you are really getting a second paper?

You might think that the precise business methods which make such things possible would make the editors and the heads of departments hardened to the ways of the publishing business. But even our thirty-eight years of experience in printing FARM AND FIRESIDE do not let us cease to marvel at the way in which mails come and go, bringing new friends or reminding us that old friends who joined us years ago are still with us.

Unfortunately, subscription lists must be arranged geographically so the mailings may be properly timed, and we have no way of determining the subscriber whose name has been on our list the longest. But here is a short list made up of friends who have lately reminded us of their continued faithfulness:

Mrs. Agnes McMeekin, Coal Valley, Ill. 38 years
Herbert Flaherty, R. 1, Dallas, S. Dak. 38
Lucia A. Kintz, Fort Wayne, Ind. 35
W. R. Satterfield, Little Falls, W. Va. 35
Ed Augustine, Pound, Wis. 33
J. L. Jones, Eddyville, Iowa. . . . 33
Lillian R. Billings, Kansas City, Mo. 31
Allan Morrill, R. R. 5, Fitzgerald, Ga. 31
Peter Dunn, Goldendale, Wash. . . 31

Other 30-Year Subscribers

The following have been with us thirty years: D. L. Crawford, Glenfield, Pa.; Mrs. Henry Furste, Humboldt, Ill.; George A. Mills, Fremont, Mich.; R. M. Kemp, Lauraville, Md.; B. B. Ross, Glencoe, Okla.

We should like to hear from any other long-time friends.

Then there are those whose constancy lies in the future. One Oklahoma man who wanted to help out a boy in a pony contest has the record for a paid-in-advance subscription. In 1913 he took out two thirty-year subscriptions which, together with the three-year subscription he already had, paid him up to July, 1976.

But our subscription manager thought it was a "shame to take the money," because the time was beyond the probable limit of human life. We therefore refunded one thirty-year subscription, so now he is paid up till only 1946!

You can readily guess that our subscription list, which now considerably exceeds 600,000 paid-up friends, is the one great treasure of FARM AND FIRESIDE. Our printing plant is made of brick and reinforced concrete, with an automatic

D2 1 13 271 JAN 16
L J LARSON
FAIRVIEW
RR 4
LINCOLN NEBR. 3Y

How a stencil looks. Mr. Larson is manager of William Jennings Bryan's farm

sprinkler system and plenty of fire hose besides. But even with all these precautions a duplicate list is kept in the vault of a national bank in another part of the city, and that list is revised every week.

So in case of a fire or explosion we should simply have FARM AND FIRESIDE printed in the nearest shop that had a big enough press and mailing department.

I'll now go back and tell what happens when a bag of mail gets run over by a train, or when there is a wreck on the road. The post-office authorities can usually find enough addresses to tell us what towns the mail was intended for, and then we immediately print and send new copies to every subscriber in all those towns.

We would rather have some subscribers get two copies than have a single one missed entirely.

Two years ago a whole carload of FARM AND FIRESIDE's was caught in a flood. The Post-Office Department sent back all the wet, soggy copies they could find, and we worked night and day get-

ting out another edition. The total delay was only four days. All the work connected with publishing FARM AND FIRESIDE runs on schedule, like a limited train.

One great problem is the army of subscribers who are moving around. The changes of address for a year are usually between thirty and forty thousand. This would give little trouble, and no one would miss a copy, if we were notified promptly three weeks in advance, giving the new address as well as the old.

Another thing that would relieve our mailing department of hours of work, and would save annoyance too, perhaps, is to enclose the yellow label off your last copy when you write us about your subscription. For instance, if you subscribed under the name of J. H. Smith and in writing us the next time signed John Smith, we have no way of telling whether it is the same person.

Then in every mail are some letters without a signature, post-office address,



The oldest subscriber to Farm and Fireside. He is 95 and his rooster is 10

or any clue as to where they come from. The postmark on the envelope helps out in most cases, but sometimes that is blurred, or the letter was mailed at a railway post-office. Naturally the subscriber feels hurt at not hearing from us, and all the while we are waiting for a chance to write him or send him the paper.

Over thirty thousand letters and cards are sent out in a year to subscribers explaining various little matters such as the delay just mentioned.

Any subscriber can tell from the stencil when his subscription runs out. On the first line is a letter like D or R. That tells how the subscription was received, whether through an agent, clubbing offer, or something of that kind. The figures following it give the date the subscription was received. In the upper right-hand corner is the date of expiration.

The month is either spelled out or abbreviated. The number after it is the year. If it says December 16, that means that the subscription is paid through the last issue in December, 1916. The number is always the year, and not the day of the month. Usually at the bottom right-hand corner are figures and letters for reference in the office. These figures tell whether it is a new subscription, a renewal, the number of times renewed, and the length of time extended.

Subscriptions are renewed for all lengths of time, and this is a matter that we like to leave entirely to the subscriber.

Naturally the long-time subscriptions mean less office work for us, and when you count your time and postage and the lower rate on long-term subscriptions, you save money too.

Let Us be Friends

But if you are interested in premiums and like to select a new one every year, or if you contribute to the paper and write us anyhow, then subscribing for shorter terms is a good way. But never hesitate to write us if you have something on your mind that you think we ought to know.

If you have a suggestion to make, or a lost friend to find, or a question to ask, give us a chance at it. If you don't like anything printed in the paper, send us something better. And, as a good farmer neighbor of mine says, "Even if we don't always agree, we won't fall out about it."

The Ideal Gift

Magazine Subscriptions

Can you think of a Christmas gift that will be more appreciated than a subscription to *Farm and Fireside* and one or more of the splendid magazines listed below? A gift that will insure a warm remembrance of the donor with each copy of the publications received during a whole year. You can order all your reading from us. One order, one remittance—we do the rest and we save you a lot of money too. Be sure to send your order before December 22d.

The Coupon Below Saves an Extra Dime



Our Premier Club

Farm and Fireside, one year	\$0.50	Our Price
The Housewife, one year . . . . .	.50	
The Ladies' World, one year	1.00	\$1.20
At regular rates	\$2.00	

Other Bargain Clubs

Farm and Fireside	\$0.50	Our Price
Woman's World . . . . .	.35	
Plain and Fancy Needlework . . . . .	.35	85c
	\$1.20	

Farm and Fireside	\$0.50	Our Price
People's Home Journal . . . . .	.50	
McCall's Magazine . . . . .	.50	90c
	\$1.50	

Farm and Fireside	\$0.50	Our Price
To-day's Magazine . . . . .	.50	
The Housewife . . . . .	.50	90c
	\$1.50	

Farm and Fireside	\$0.50	Our Price
Boys' Magazine	1.00	
People's Popular Monthly . . . . .	.25	\$1.00
	\$1.75	

Farm and Fireside	\$0.50	Our Price
Youth's Companion	2.00	
The Housewife . . . . .	.50	\$2.35
	\$3.00	



Farm and Fireside	\$0.50	Our Price
Farm Engineering50	
American Poultry Advocate50	85c
	\$1.50	

Farm and Fireside	\$0.50	Our Price
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HARD TO DROP

But Many Drop It.

A young Calif. wife talks about coffee: "It was hard to drop Mocha and Java and give Postum a trial, but my nerves were so shattered that I was a nervous wreck and of course that means all kinds of ails."

"I did not want to acknowledge coffee caused the trouble for I was very fond of it. At that time a friend came to live with us, and I noticed that after he had been with us a week he would not drink his coffee any more. I asked him the reason. He replied: 'I have not had a headache since I left off drinking coffee, some months ago, till last week, when I began again here at your table. I don't see how anyone can like coffee, anyway, after drinking Postum!'"

"I said nothing, but at once ordered a package of Postum. That was five months ago, and we have drank no coffee since, except on two occasions when we had company, and the result each time was that my husband could not sleep, but lay awake and tossed and talked half the night. We were convinced that coffee caused his suffering, so he returned to Postum, convinced that coffee was an enemy, instead of a friend, and he is troubled no more by insomnia."

"I have gained 8 pounds in weight, and my nerves have ceased to quiver. It seems so easy now to quit coffee that caused our aches and ails and take up Postum." Name given by Postum Co., Battle Creek, Mich.

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Both kinds are equally delicious and cost about the same per cup.

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Crops and Soils

February Alfalfa

By H. R. Crabb

I HAD two acres of corn stubble in the spring of 1914 that I wished to seed to alfalfa. I plowed the land in March, worked it down nicely, and harrowed it about every two weeks until the middle of June. Then I limed and inoculated the two-acre tract and sowed about one-half bushel of alfalfa seed.

I think the ton of caustic lime would have been better had I applied it in March, as its work of sweetening the soil would have been well along by June. It could not have hurt the inoculation as perhaps it did when used at the same time the land was inoculated and the seed was sown.

After the plot was sown, the weather turned very dry and very little of the seed germinated until in September, when plenty of rain brought on a most luxuriant growth. The alfalfa was nearly knee-high by the time winter came. The plants wintered in fair shape, and last spring we harvested about a ton of hay from the first cutting, and another cutting did well too. Not so bad? But it cost too much to seed it, and we lost the use of the ground for a whole year.

This year we had two acres of corn stubble just above the first piece. We wished to sow this tract in alfalfa. I bought one-half bushel of seed, moistened it with commercial cultures of alfalfa bacteria obtained from the United States Department of Agriculture, and sowed the seed the last day of February. By June 1st this was large enough to hide the corn stubble and produced one good cutting of hay this year. Of course, this plan of seeding would not be practicable if the cornfield had not been worked free from weeds last year. As limestone outcropped on the plot I did not think it needed liming. However, the lime could be applied the year before to the corn crop with good results.

I figure the difference in cost of seeding as follows:

Cost of seeding first piece—	
4 days with the team.....	\$16.00
One-half bushel seed.....	5.00
Loss of land and rent one year....	6.00
Total cost	\$27.00

Cost of seeding second plot—	
One-half hour with team.....	\$0.30
One-half bushel seed.....	6.00
Total cost	\$6.30

We will have to the credit of this last plot one ton of hay worth about \$15, which will bring the difference in cost of the two patches to about thirty dollars. I am sure the seed sown in February will have a stronger root system and be in better shape to stand the cold weather than the summer plantings.

Do not think that I advocate early spring sowing on frozen ground for all types of soil, but for the thousands of acres of soil naturally adapted to the production of this legume I believe it will give even more satisfactory sets at a fraction of the cost of summer seeding, and if the first attempt should fail you can reseed in August without any loss except the seed used in the first trial.

Seed-Potato Farming

NOW that the superior value of Northern-grown potato seed is recognized, seed potato stock from our northern tiers of States moves south.

Maine, New York, Michigan, Wisconsin, and Minnesota furnish most of this seed stock to Southern growers. The return current from the new crop begins setting northward soon after midwinter, and continues until the Northern crop is ready for the table.

The Wisconsin seed-growing industry came into popularity following the waning of wheat production. The present dozen and more potato counties in northern Wisconsin during an earlier generation were special-crop wheat country until the soil became "wheat-sick." But soil-robbing continued when the potato succeeded wheat, until finally small, unmarketable potatoes became the rule. Then, by the advice of and aid of the horticultural department of the university, a potato-dairying combination with a rotation of crops and stable manure was adopted, and the potato came back into its own.

As potato culture became more intensive, growers recognized the importance of guarding against potato diseases and pests, and the need of systematic seed inspection and certification was advocated. During the year 1914 there was inaugurated a plan of field and bin inspection of potato stock by the Wisconsin College of Agriculture.

Some four years ago a Wisconsin State potato growers' association was organized which now numbers considerably over two hundred active members in the several potato-growing counties.

The present effort of the growers through their organization is to standardize their potato crop, and by means of general inspection and certification to build up a nation-wide potato-seed trade that will add materially to the profits of the business. Several of these potato States are neck and neck in the race.

Alfalfa 15 Years Old

HERE is a 15-year-old plant of Grimm alfalfa that is still vigorous. A product of the northern part of the United States, Grimm alfalfa has developed into a hardy variety.

The weaker plants of the variety win-



ter-killed during the years of growth in the North. This left the stronger and more hardy plants to propagate the variety. The weaker plants dying every year resulted in the hardy plants of today.

The Onion Fell Down

THE onion crop yield in the dozen important onion-growing States is almost exactly an even hundred bushels per acre below that of 1914. These important onion States are Massachusetts, New York, Ohio, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Colorado, Washington, Oregon, and California.

In 1914 the average yield in these States was 402 bushels per acre, and in 1915 it is 298 bushels.

Massachusetts led in 1914 with an average of 460 bushels per acre. In 1915, Iowa, Washington, and Oregon stood first with yields of 400 bushels per acre.

To Find the Water Level

"THE water level" is a term used in speaking about soils. It means the depth in the ground where the soil is saturated with moisture.

To find it, simply take a posthole digger and dig down until water stands at the bottom of the hole. Do this in an ordinary season when the ground has about the average amount of moisture. For most crops the water level should be about three feet below the surface, for alfalfa at least five feet. A water level two to three feet deep is excellent for the majority of farm crops.

DOCTOR BENTLEY of the Oklahoma Station believes that Bermuda grass is the solution of the Oklahoma pasture problem; but, says he, it should not be grown where alfalfa will do well, as alfalfa is a better hay crop, and just as good for pasture as Bermuda grass.

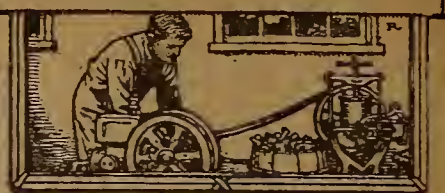
Prevention of Small Potatoes

THINNING potato plants prevents small tubers and insures uniformity in size just as thinning fruit accomplishes the same end with apples, peaches, and the like.

Experiments followed for two years by Whipple of Montana have resulted in no reduction of yield, and the quantity of small, unmerchantable potatoes was negligible.

He thinned the plants to one stalk to a hill after a growth of about six inches had been made. With this method of culture potatoes can be planted considerably closer in the row.

Headwork Shop



When Gasoline Runs Low



ONE sometimes is caught out with a low supply of gasoline through having to make long detours to avoid bad roads or from other causes. The supply can be made to stretch over this emergency by

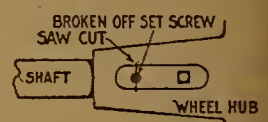
adding denatured alcohol or kerosene. Occasionally there is sufficient gasoline for the ordinary level road, but not enough for an unexpected hill.

In this case the principle of pressure feed can be applied. Screw the cap down tight on the gasoline tank and then sharpen a match to fit the ventilating hole in the cap. Blow into this hole as hard as possible and immediately plug with a sharpened match. Usually this will enable the driver to make the hill without further trouble. But if not, he can turn the car around and back up-hill.

W. V. RELMA.

Broken Set Screw Removed

WHEN a set screw breaks off flush with the surface, it may be easily removed as shown in the sketch. In this case it happened on a sprocket-wheel hub. I cut a groove across the end of the remaining piece (cutting into the hub also) and then I easily removed the set screw with a screw driver.



FRANK HAVERLAND, JR.

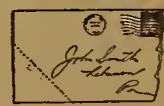
Surrounded by Sunflowers

EVERY spring we plant sunflowers along every fence on our place, putting them about one fence post apart, though they may be planted much closer. In the fall they look very beautiful, outlining the whole farm, with the fields bounded in gorgeous yellow. A little later we gather all the heads and store them away for chicken feed. It takes little trouble to do this, and I think any farmer will be well repaid if he tries it.

We take a bag of seeds and a round cane. The cane is stuck about one inch in the ground, a seed dropped in, and the hole closed with the foot. Our cattle do not bother the ones planted in the pastures, and they grow without any attention whatever after planting.

H. E. WARD.

Bookmark from Envelope



A CONTRIBUTOR sent the following anonymously: To make a bookmark at a

moment's notice, simply clip off a corner of an old envelope. This mark is convenient and saves damaging the book by turning down the corner of the leaf as is often done. A pocket for money to be sent in mail can also be made in this way.

Use for Old Casings



AN OLD casing is a good thing to have either to run in

on in case of trouble or it can be cut up into blow-out patches, which are really better than those at most stores.

Of course it is necessary to trim carefully the edges of any such home-made patch so it will be very thin where it comes in contact with the inner tube.

Gate Within a Gate



THE shaded portion of the sketch shows how a small gate for foot passengers can be hung inside

of a large stock gate. This saves opening the entire gate and in no way weakens it.

ARTHUR GELIN.

TINNERS' shears are excellent for cutting stone-coated prepared roofing. They leave a smoother edge than a knife.

E

What Watches Will Do

By CARLTON F. FISHER

IF YOU are ever in Washington, D. C., and happen to be near the State, War, and Navy Building a little before noon, you will notice groups of people with watches in hand, looking toward a black ball on top of the building.

It looks like a great knob on a flag-pole, but it's the government time ball.

It is this time ball by which all observatory clocks in the United States are regulated. In the cities, observatory time, which is the same as railroad time, is the only time observed. This is exactly the same for certain districts of longitude, but the time changes at hour intervals, giving the well-known Eastern, Central, Mountain, and Pacific time.

In the country districts sun time is widely used. It is different from observatory time except at the different time meridians. Thus at Denver, which is on the so-called Mountain or 105th meridian, sun time is the same as observatory time. Sun time is the time the sun dial indicates, and is different in every locality from east to west. Sun time is therefore simply local time.

These two systems of time are confusing, and eventually observatory time will be generally used. There is no reason why people in country districts should should not have the right time. You can get it over the telephone, and you can keep it with good watches and clocks.

Hours and hours of valuable time are wasted by waiting for trains, even though they are on schedule time. I have known of men whose watches were half an hour off, and who therefore had to give themselves that much leeway in order to make connections with a train or traction car.

Good watches will not vary more than fifteen seconds in a day, and the best watches will vary less than five seconds, even under extreme conditions. When a watch is tested, its exactness is noted when the watch is placed in various positions vertically, also on its face and on its back. It must keep good time at temperatures ranging from 40 to 90 degrees. To thoroughly test a watch takes about fifty-five days.

How Watches are Made

The balance wheels on modern watches are made with split rims or a similar device to allow for changes in

temperature, so that the wheel will not expand as it becomes warm. Most watches are now made by machine and finished by hand. Machinery makes the parts most uniform, but watch machinery must be overhauled at short intervals so as to correct the wear of the cutting edges.

Never go near a dynamo with a watch in your pocket unless you are sure that it is made of non-magnetic material. This applies especially to the hair spring.

Watches having backs that screw on are considered more nearly dust-proof than those having hinged backs. But even though your watch is dust-proof, it is best not to wear it around a threshing machine or grinding mill. If you do, the chances are it will need cleaning very soon.

Novelty watches are always interesting. Some French watches have nearly all the mechanism of a Grandfather's clock, such as the phases of the moon, and indicators telling the day of the month and even the month of the year.

Some watches have an oscillating weight, so that as a person walks the watch winds itself automatically. Stop-watch attachments for timing races are more familiar, and watches which by the pressing of a lever announce the time of day and night by a gong inside are now well known.

But these novelties are in the end less satisfactory than accuracy, and the best judgment in purchasing watches calls for only a few things. First, don't get a fancy case. An excellent case is simply a plain one with the initials or monogram engraved on the back.

A fancy dial is not as satisfactory as a plain dial with large, clear figures. Arabic figures, being more easily read, are crowding out the old-style Roman numerals.

Gold hands, while attractive, are less satisfactory than steel hands for telling the time in a dim light.

Above all, keep your watch dry, and don't wind it too tight. While watches make excellent gifts for children, many parents make the mistake of giving a boy a cheap watch for his first one. Such a watch seldom keeps accurate time, and is worse than no gift, because it detracts from the boy's confidence in his time-piece as well as giving him plausible excuses for tardiness at school and carelessness in doing his work on time.

What is the best and safest way of disposing of sewage from a house that has a plumbing system?

Answer: Build a septic tank of concrete, and run the liquid overflow into drain tile.

Is a bulldog the same as a bull terrier?

Answer: No; they are entirely different breeds and have a different appearance.

Is there any way to make cheese out of buttermilk?

Answer: Yes; a cheese similar to cottage cheese and practically as good can be made from buttermilk.

When was the Bahcock test for milk discovered?

Answer: In 1889; but it was not announced till 1890.

What is the voltage in the electric lighting plants intended for farm use, and are such plants dangerous?

Answer: The voltage is usually from 32 to 40 volts. This is not strong enough to give a shock, and the plants are absolutely safe.

Are metal silos practical?

Answer: It depends entirely on the quality of metal. Several excellent rust-proof metal silos are now on the market.

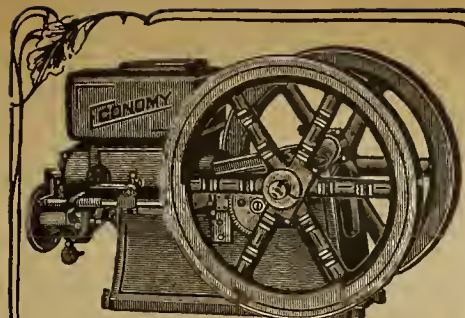
Are these so-called everbearing strawberries a sure thing, or are they a fake?

Answer: Everbearing strawberries are a "sure thing," but they are not yet important commercially. Raising them is mostly a home-garden proposition.

Someone Needed

WHY shouldn't the thousands of little towns of a few hundred inhabitants and surrounding farmers in localities where peaches are not grown have a carload or two shipped to them every year direct from the grower? It only needs someone to take the initiative.

Almost anyone would rather sign up for a bushel or two of peaches which at wholesale rates would cost no more than half that quantity bought from fruit stores or groceries.



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We have fifteen warehouses in different parts of the United States (one near you) from which we ship American Beauty Buggies and Economy Gasoline Engines.

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The ABC of Home Painting

It gives simple directions, written so that anyone can easily understand them, for painting, varnishing, staining and enameling all sorts of surfaces in the house and around the farm. Drop us a line and we will send you a copy.

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is a mighty interesting game for both young folks and grown-ups. It's good training, too, for anyone who buys or sells in the markets. Sent for 10 cents in stamps.

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What and Why

Answered

HAS a gallon of kerosene or gasoline the more power when used in an engine?

Answer: Kerosene has considerably more.

Where can I get government hog-cholera serum?

Answer: Government hog-cholera serum is not for sale. Only a very small amount is made, and that is used for experiment purposes; but government inspection is maintained at many commercial serum factories, and the government-inspected serum is the best.

Can concrete be made with gravel and cement, without sand, if the gravel is reasonably fine?

Answer: Yes; but it will take more cement for a first-class job.

What is the best general-purpose tractor for farm use?

Answer: There is no one tractor best for every condition. Tell us the size of your farm, the crops raised, nature of soil, and we shall name half a dozen good machines from which you can make a selection.

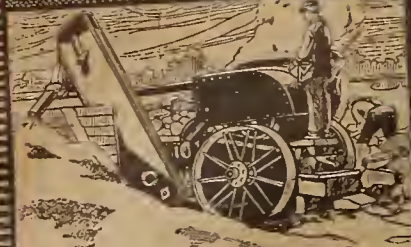
Do you think that hollow-tile blocks are strong enough for making a 200-ton silo?

Answer: Yes; a good grade of hollow tile is one of the best materials for building silos of all sizes.

Is there a breed of cattle known as the Polled Holstein?

Answer: Yes.

Grind Limestone—It Pays!



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Live Stock—Dairy

The Hog-House Floor

HOG GROWERS are often confronted with the question of what type of floors to use in their hog houses. Of course the farmer in building his hog house will desire a substantial floor which can be kept dry and warm. The experiment station in the Kansas State Agricultural College has found that the hollow-tile concrete floor is the best type for hog houses. The cost is slightly more than the cost of the ordinary floors, but it is more economical in the long run.

This tile concrete floor is constructed of hollow tile 4x10x12 inches, over which there is spread a coat of concrete varying in thickness from one to two inches. In putting in this floor, the ground is first graded to the proper level and slope, and a thin coat of sand spread over the ground on which to bed the tile. The tile is then placed on the ground, leaving cracks sufficiently wide to permit the concrete to run through so that it will adhere to the blocks. The tile concrete floor is one that should be well hedged.

"A floor constructed of concrete and hollow tile," says Ray Gatewood, instructor in animal husbandry in the Kansas State Agricultural College, "is much warmer and drier than the ordinary concrete floor because the air space breaks the capillarity which is ordinarily found in the solid concrete floor."

"While a floor of this kind is not as warm as a good board floor, it is permanent if properly put in, and gives satisfaction. It is easy to keep clean and easy to disinfect. There are no crevices and cracks, and there is no absorption as in the case of the dirt and board floors. It is more sanitary and more permanent."

"Board floors are not sanitary because there are cracks and crevices in which dirt and filth accumulate, they are harder to disinfect and clean, and have to be replaced from time to time."

"Hogs will often root up a dirt floor unless firm clay is used. It is much more likely to become dusty, and any water or filth tends to soak into the ground. Consequently, it is not so sanitary as is the concrete type of floor."

"Brick floors are used to some extent, but they are not so sanitary as the concrete floors, and are hard to keep clean. They are as cold as the solid concrete floor."

The concrete floors, in the judgment of the Kansas Experiment Station, are found to be the best and are giving the best satisfaction, but between the hollow-tile concrete and the solid concrete floor, the hollow-tile one is conceded first place.

Ten Million Cows Board

H. M. COTTRELL says that not over a third of the so-called dairy cows of the United States are profitable to their owners. Ten million "boarder" cows are milked whose yield is worth less than their feed. Their owners seem to keep them for the sole pleasure of milking them fourteen times a week, cleaning out after them, and otherwise enjoying their society.

Nibble Days, Sleep Nights

By Josephine Chapin

THE income from my little flock of Leicester ewes looks good to me. Here are the figures:

Wool from 3 ewes, 34 lb @ 25c... \$8.50
Four April lambs, 517 lb @ 7½c... 38.77

Total\$47.27

I kept one ewe lamb for a breeder, which I value at \$10, and one ewe lamb died at birth.

My method of handling sheep is to give them first-class care during the winter so they will be able to feed their lambs well and still keep in prime condition all summer on an ordinary pasture. Every night they are shut in a safe barnyard, where they can lie down and rest quietly, and are let out early mornings to feed while the dew is on the grass. This yard has a comfortable shed which shelters them from storms.

The excellent condition of my sheep and lambs prove that sheep do not need to roam and nibble all night. They are

much safer in a well-protected yard than in the pasture. I seldom have to call or bring the sheep at night.

My ewes have never been exhibited, but my new ram is pure-bred and took first prize at five different fairs this fall.

Why Hogs Root

HOGS root because they want something Nature leads them to search for in the ground. What is this? Probably worms and other animal food. Anyhow, Evvard of Iowa, whose hogs were rooting up the pasture, instead of ringing them, gave them meat meal in self-feeders. In three days they stopped rooting, and as they were getting a better balanced ration, no doubt the meat meal not only saved the pasture but added more to the gains than it cost.

Water Supply Easy Now

PUMPING and carrying water are two of the most time-consuming farm tasks. They are done in hundreds of different ways, most of them tedious.

Several ingenious devices have lately appeared that offer relief. One is a galvanized steel standpipe that can be installed in the barn or any building that will protect it from frost in winter. An excellent place is in the middle of the silo where the heat of the silage will keep it warm. This tank is made 20 feet high and from two to three feet in



diameter. The two-foot size holds 14 barrels and the three-foot holds 33 barrels.

This standpipe was originally intended for use with windmills, but a gas engine or any other convenient power can be used.

Another interesting water-supply help for use with electric motors is a basement pressure tank filled with a motor-operated pump. The starting and stopping of the electric motor is automatically controlled by the air pressure in the tank.

Anti-Corn Hogs

PORK-MAKING outside the corn belt is getting a boost from the feeding of barley. Minnesota Station experiments show that when 90 to 95 per cent of tankage, 100 pounds of pork can be made for each 400 pounds of rolled barley and 20 to 30 pounds of tankage fed.

A mixture of ground oats and field peas made an equally rapid gain.

Another excellent combination is one pound of barley, two pounds of skim milk. Corn and barley mixed give even better results than barley alone for the grain part of the feed.

Feed at Low Cost

"A MOST important field for profit in the stock-keeping and poultry lines of business," says that master of stock-feeding, Prof. W. A. Henry, "is going to be realized by reducing the cost of the ration fed. The trick is turned by making a close study of feeds and choosing the ones that have the essential nutrients so balanced as to make rapid gain in meat production or abundant yields of milk or eggs at lower cost than the average feeder is getting."

Cow Earns Big Money

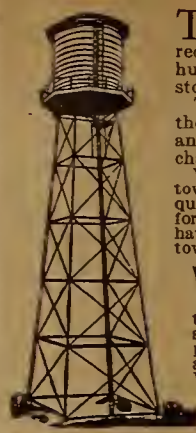
IT IS claimed for Dairymaid of Pinehurst, a Guernsey cow owned by W. W. Marsh of Black Hawk, Iowa, that she is earning \$1,000 a year. She is a world's champion, and has a record of 17,285 pounds of milk and 910.67 pounds of butterfat a year—and the calf she brings each year helps to make up that thousand dollars.

Value of Good Bulls

IN NEWAYGO COUNTY, Michigan, one farmer raised the profit of his entire Guernsey herd from \$13.04 per cow to \$50.01 in seven years by the use of pure-bred bulls.

In another herd the average production of butterfat per year was raised

70-Mile Gale Didn't Affect This Tower



THE owner wrote us that this tank and tower stood directly in the path of a 70-mile hurricane and came through the storm O. K.

This is truly a tribute to the thoroughness of construction and the splendid material that characterize all our work.

We build tanks of any size for towers any height, to suit any requirement, and for every purpose for which a tank can be used. We have built over 14,000 tanks and towers of every conceivable kind.

Water Systems from \$39 up

We install water supply systems—from the smallest and simplest for homes to complete plants for railroads, factories and municipalities. Simplex Water Works Systems for homes are sold for as little as \$39.

Our engineering department is at your service to help you reach a wise decision—whether your requirements are great or small.

Write us telling your needs and ask for Simplex and Tower Circular No. 72.

SIMPLAR (Hopper) Gasoline Engines

Four H. P. \$64—Six H. P. \$94. For use in connection with water works systems or for general purposes. A remarkable engine value.

The Baltimore Company, Baltimore, Md., U.S.A.

HARDER SILOS

Best and Cheapest

Heavy, non-conducting steel-bond walls; rigid dowl construction, anchored solid as an oak, convenient door system, safe ladder; save all the corn crop. Catalog sent free. Harder Mfg. Co., Box 16, Cobleskill, N. Y.



ICE and ICE TOOLS

Double Row Plows. Equal twenty men with snow. Catalogue free. WILLIAM H. PRAY, Verbank, New York

SKUNK

We pay top prices for Skunk, Mink, Muskrat, and all raw Furs. Free list free. M. J. JEWETT & SONS, REDWOOD, N. Y. DEPT. 7.

NEW YORK FARMS

Those desiring to purchase farms should write for free Bulletins—"Farms for Sale" and "Agricultural Advantages of New York State." Address Bureau of Statistics, State Department of Agriculture, Albany, N. Y.

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Bucket-Knapsack—Barrel—Traction and Gas Engine Machines. We make them all. Directions FREE. Field Force Pump Co., Dept. 14, Elmira, N. Y.



Booklet Free \$3 Package guaranteed to give satisfaction or money back. \$1 Package sufficient for ordinary cases. MINERAL HEAVE REMEDY CO., 425 Fourth Ave., Pittsburg, Pa.

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FREE TRIAL, FULLY GUARANTEED. Easy running. Easily cleaned. Whether dairy is large or small, obtain our handsome free catalog. Address BOX 6058 AMERICAN SEPARATOR CO. BAINBRIDGE, N. Y.

Only \$2 Down One Year to Pay!

Buy the New Butterfly Jr. No. 2. Light running, easy cleaning, close skimming, durable. Guaranteed a lifetime. Skims 95 quarts per hour. Made also in four larger sizes up to 6 1/2 shown here.

30 Days' Free Trial. Earns its own cost it saves in cream. Postal brings Free catalog, folder and "direct-from-factory" offer. Buy from the manufacturer and save half. ALBAUGH-DOVER CO. (12) No. 674 2159 Marshall Blvd. CHICAGO

ABSORBINE

Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, Muscles or Bruises. Stops the lameness and pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone. Horse can be used. \$2 a bottle delivered. Describe your case for special instructions and Book 2 K Free. W. F. YOUNG, P. D. F., 23 Temple St., Springfield, Mass.

BETTER THAN ADVERTISED

That's the kind of clean skimming, high capacity, beautiful finish—cream separators we build. Every modern separator improvement. Frank A. Elze, White River, Wisconsin, writes: "Your separator is better than you advertise." That's exactly what has built up the greatest Galloway business and keeps the Galloway chain of factories running steadily. Test it without cost ninety days against any make or kind! You are the judge! Do not buy a separator of any kind until you learn all about my new 1916 prices, selling plans and see my big free special catalog. Separators shipped from Minneapolis, Kansas City, Council Bluffs, Chicago or Waterloo. Wm. Galloway Co. Box 299 Waterloo, Iowa



from 225 to 341 and the per cent of butterfat from 3.94 to 5.05.

In a special investigation of the kind of sires used on dairy farms, the American Guernsey Cattle Club found that the income from the herd was \$837 where pure-bred bulls were used, \$439 where grade sires were used, and \$178 where scrubs were used.

Ways to Seal the Silo

IN a good silo the contents are protected from the air on all sides except the top. The air always spoils some of the silage on the top unless feeding is begun as soon as the silo is filled.

Various methods for preventing this waste have been tried. One is to cover the silage with straw and then soak this protecting layer well with water. This keeps out the air fairly well and the waste is only slight. Another method is to sow oats on top of the silage. When they germinate, the dense mass excludes the air.

The simplest and probably the most practical method is to remove the ears from the last three or four loads of corn-stalks brought to the ensilage cutter and then run just the stalks through. In that way, the corn itself is not wasted and the loss from the stalks is but slight.

How Long to Churn

THE customary length of churning is from fifteen to twenty minutes in hand churns. If butter comes in less than fifteen minutes, it is likely to be too soft and will have a poor body. If cream takes longer than half an hour, that is a sign that it was not sour enough or was much too cold.

The common practice of washing butter with several wash waters is unnecessary if you stop churning when the granules of butter are as big as peas. One washing will then remove the buttermilk completely. But if the lumps of butter are too big, the buttermilk is hard to wash out. From the size of peas to that of grains of corn is just right.

CREAM and milk get stringy because of a germ which gets into the milk in a dusty stable or from a stagnant pool in which the cows have waded. Scrape the dried manure and mud from all parts of the stable, and whitewash.

The Ninety and Nine

OUT of over 6,000 cattle vaccinated for the prevention of the blackleg disease in one district of Kentucky, 95 per cent and a fraction over escaped the infection while contagion existed in the immediate vicinity.

Expert live-stock authorities agree that it is the safest plan to vaccinate young cattle under three years of age every spring and fall and at any time when the disease appears in the locality where young stock are kept. It is too late to vaccinate after an animal shows signs of the disease.

Itching Post Pointers

HERE are some of the opinions of users that point to desirable construction in hog-oiling devices. Hog oilers, or itching posts, are simply a means of treating hogs for lice and parasites without dipping them. The hogs rub the itching place on the hog oiler and the oil puts the quietus on the insects bothering him.

A good oiler will work with hogs of all sizes. It will not leak oil when not in use. It should enable a hog to rub his throat and belly. It should not waste oil when the hog lies down against it. It should have considerable capacity so as not to need attention or refilling frequently.

Hog oilers are good things, though they do not take the place of good care and good feed. But when a hog is well cared for and fed, and in addition is free from parasites, he thrives.

Hogs are pretty good judges of oilers. If they use them, you may be sure they are all right. It's a good plan to get the oilers on trial and then let the hog decide.

Calf-Feeding Costs

THE cost of feeding a dairy calf to the age of six months where skim milk is used is about \$13, according to a Nebraska experiment. A six-months-old skim-milk calf should weigh from 250 to 400 pounds, depending upon the size of the breed and the thrift of the calf.

To make such a gain, the average calf consumes 175 pounds of whole milk, 2,700 pounds of skim milk, 125 pounds of grain, and 450 pounds of hay.

THE town of Walsh, Marietta County, Wisconsin, has no farm without at least one silo. Is there a town with a like record in any other State?

Mollycoddled Winners

DON'T go crazy about getting the highest-scoring prize animal or bird at the stock show or fair with which to head your herd or flock.

The small margin by which one animal wins over another in the show ring or show pen does not guarantee that his progeny will be worth the high premium that a prize-winning animal often commands.

Winning first prize over a large class is merely placing the ribbon according to one man's opinion, and is no sure criterion that his judgment is absolutely right.

A well-developed grade may outclass the bluest-blooded and most valuable animal in so far as appearances go.

When choosing a breeding sire or any foundation stock, make sure of the performance of his ancestry for several generations back, and let someone else pay the high dollar for the talked-about prize-winners whose winning in many cases depended on over-fatness and unlimited mollycoddling.

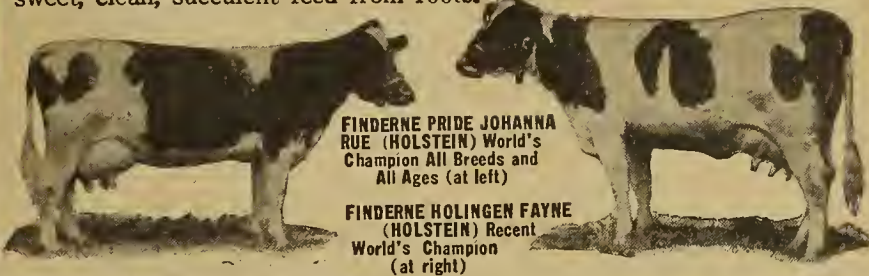
What The Owners of World's Champions Say About

The Great Milk Producing Health-Maintaining Feed



"Like June Pasture the Year 'Round"

Owners of World's Champions are almost invariably feeders of DRIED BEET PULP. Read the letters below and you will see that these men who have developed the greatest milk producing animals in the dairy world are enthusiastic in their endorsement of this sweet, clean, succulent feed from roots.



FINDERNE PRIDE JOHANNA RUE (HOLSTEIN) World's Champion All Breeds and All Ages (at left)

FINDERNE HOLINGEN FAYNE (HOLSTEIN) Recent World's Champion (at right)

The Larrowe Milling Co., Detroit, Michigan.

Dear Sirs:—Replying to yours of September 16th and asking if FINDERNE Holingen Fayne was fed upon DRIED BEET PULP during her world's record breaking test—will say that this cow as well as FINDERNE PRIDE JOHANNA RUE and FINDERNE Mutual Fayne who are also world's record cows in other classes were ALL fed DRIED BEET PULP. The amount fed daily would be approximately 15 lbs. to each cow. SOMERSET HOLSTEIN BREEDERS CO., Somerville, N. J. Jacob Todd, Sec'y.



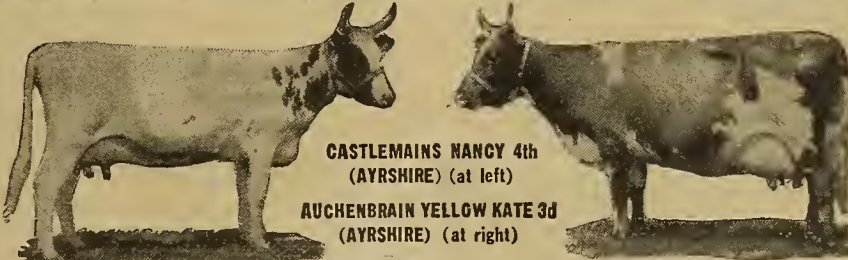
DUCHESS HENGELVELD KORNDYKE, World's Champion 3 Year Old Holstein (at left)

TRIPLE CHAMPION MARVA (GUERNEY) (at right)

Dear Sirs:—All the cows at Emblagaard receive Beet Pulp at least once daily. Our cows in test are fed Beet Pulp (soaked) with the grain ration four times daily. Among the renowned cows in our herd are DUCHESS HENGELVELD KORNDYKE, the World's 3 year old Champion Holstein, LILITH PIEBE DE KOL and NORTHERN FIDES DENER with a 7-day test of 35 94 lbs. butter. I esteem DRIED BEET PULP as one of the most valuable foods there is. W. W. BLAKE ARKCOLL, Mgr. Emblagaard Dairy, Big Bay, Mich.

The Larrowe Milling Co., Detroit, Mich.

Gentlemen:—My cows have been fed DRIED BEET PULP as part of their ration regularly in the winter months for several years. It is moistened with hot water in the morning and fed in the evening. The cows are very fond of it, and several have made large records of late as stated below. TRIPLE CHAMPION MARVA, produced in 365 days, 14,370 3 lbs. of milk, 4.92 per cent and 703 27 lbs. butter fat. NOVICE MASHER, 13649 0 lbs. milk, 5.18 per cent and 706.97 lbs. of butter fat. BESSIE RAMER, 13487 lbs. milk, 4.48 per cent and 609.91 lbs. butter fat. Yours truly, E. R. ANDREWS, Elm Leigh Farm, Putney, Vt.



CASTLEMAINS NANCY 4th (AYRSHIRE) (at left)

AUCHENBRAIN YELLOW KATE 3d (AYRSHIRE) (at right)

The Larrowe Milling Co., Detroit, Michigan.

Gentlemen:—We think our cows will not do their best work unless part of their ration is made of succulent beets or Beet Pulp. You will find herewith records of Castlemaims Nancy 4th and Auchendraim Yellow Kate 3rd. This last cow is now the fourth on the list of Ayrshire Cows. CASTLEMAINS NANCY 4th—produced in 365 days, 14,494.8 lbs. of milk, 547.03 lbs. of fat and 644 lbs. of butter. AUCHENBRAIN YELLOW KATE 3rd—produced in 365 days, 21,123 3 lbs. of milk, 888 33 lbs. of fat and 1045 lbs. of butter. Yours very truly, E. S. DEUBLER, Supt. Peshurst Farm, Narberth, Pa.



IMPORTED LESSNES-SOCK BUNTIE (AYRSHIRE) (at left)

And LUCKY FARCE CHAMPION YEARLING JERSEY (at right)

The Larrowe Milling Co., Detroit, Michigan.

Gentlemen:—We attribute our success largely to the feeding of DRIED BEET PULP which keeps our cows in excellent condition, enabling them to properly digest their regular ration. Lessnes-Sock Buntie was for a time last year the Champion 2 year old of the world. Very truly yours, JNO. SHERWIN, Prop. South Farm, Breeders of Ayrshire Cattle, Willoughby, Ohio.

The Larrowe Milling Co., Detroit, Michigan.

Gentlemen:—In regard to the use of DRIED BEET PULP for our cow LUCKY FARCE when she was making her world's record, I beg to inform you that we did feed her DRIED BEET PULP. The yearling record of LUCKY FARCE was 14,269 lbs. of milk, 635 74 lbs. of butter fat, equivalent to 747 lbs. of 14 oz. butter. Very truly yours, H. O. SAMPSON, International Correspondence School, Demonstration Farm, Scranton, Pa.

Try Dried Beet Pulp in Your Ration

Don't you think, Mr. Dairyman, that a feed that receives such unqualified endorsement from the owners of World's Champions of all breeds, ages and classes, is surely worth trying in your ration. No matter what you are feeding now you can improve your ration, increase the milk yield, keep your cows healthier and make larger milk profits by adding DRIED BEET PULP. Order through your dealer. Look for the Trade Mark and Guarantee on the Tag.

The Larrowe Milling Co. Gillespie Bldg., Detroit, Mich. Western Orders filled from (14) Western Factory

Order Beet Pulp NOW! while the fresh new crop is obtainable. The supply is limited. Avoid disappointment. Order NOW.

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Save High Lifts.

Built low—wide tires prevent rutting

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Before you decide on any engine, make this test on your own farm at our expense. Try any size Maynard for 60 days, without sending us a penny. There is nothing on your farm that will be of so much help to you, nothing that saves so much work, time and money as a good power outfit. It's going to make a big difference to you whether you get the right engine or the wrong one. **There's a big difference in cost—and a still bigger difference in service.** There is no longer any reason why you should take a chance of getting anything except the right power outfit. After this 60 days' free trial, if you think there's a better engine made at any price, or its equal at anywhere near its price, return the Maynard at our expense. You don't send us a cent. This 60 days' trial is free.

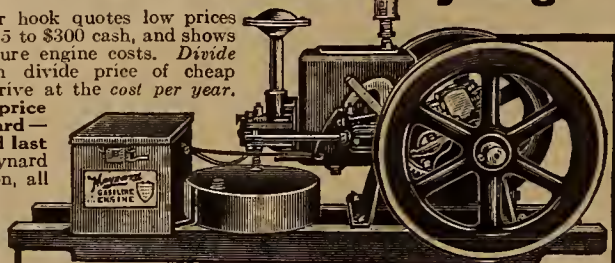
Divide the Cost by Eight!

Our book quotes low prices that save you \$25 to \$300 cash, and shows you the safe, sensible way to figure engine costs. **Divide Maynard prices by eight**, then divide price of cheap engines by three, and you will arrive at the cost per year. Read why no engine at our price will last as long as the Maynard—why no engine at any price will last longer. There are 16 big Maynard features of design and construction, all of which cannot be found on any other engine. With your book we will send you our "Comparative Chart" that makes it easy to compare different makes of engines. Don't decide on any engine till you read our book.

Mail postal now. Just say "Send Engine Book Free," and it will come by return mail, postpaid.

Charles William Stores

538 Stores Bldg., New York



Our Rating 1 1/2 H. P.; Our Price, \$29.75

Actual factory tests prove this engine develops up to 1 1/2 H. P. at normal speed. All Maynards are rated at normal speed instead of speeding them up. A speeded up engine is like a speeded up horse—all right for a while but can't stand the strain. If we speeded up our 5 H. P. as some others speed up theirs, we could give it a much higher rating than we do. Our price, \$29.75, for this 1 1/2 H. P. engine (our rating) is an example of the low prices we quote on larger sizes. Actual Factory Test card, sent with your Maynard, shows actual horse power developed. Write today for this greatest money-saving engine book published.



Farm Notes

Shake-up Sometimes Good

By F. W. Wilson

YOU have heard of business organizations getting in a rut and the business becoming unprofitable because of sticking to obsolete methods, while competitors were taking the trade by originating new ideas. In cases of this kind the usual move is to clean out the old officials that were responsible for the decline in business or loss of trade. A "shake-up" is the common designation of such a move.

An old orchard sometimes needs a shake-up to make it produce profitably. Old trees become root-bound in certain dense soils, making it difficult for the roots to force their way into fresh feeding beds where necessary plant foods are available. The result is the trees merely exist and make little or no growth in root or branch and of course make no returns in fruit.

Feed a hen just enough merely to keep her alive and she will not lay eggs. Eggs are made out of the surplus that the hen doesn't need to keep her in good physical condition.

Likewise, fruit is made by the tree from the surplus plant food over what is required to grow new wood and leaves. Ever think of it in just that way?

Mr. E. H. Fitzhugh bought a farm in New London County, Connecticut, in 1913. An old apple orchard graced—or, more properly speaking, disgraced—the place, for it bore no apples and paid no rent for the land occupied. In the fall of 1913 he pruned the trees, but they bore no fruit in 1914.

In October, 1914, Mr. Fitzhugh decided it was time for a shake-up, and what was more fitting to use for the shake-up than dynamite?

Four holes were made twenty-four inches deep and six feet away from the trunk of each tree. Then the holes were loaded with a small charge of the big noise-maker.

In 1915 the trees bore a crop of extra fine fruit, and present prospects seem to be good for a vigorous future production of the trees thus treated.

There is no mystery about it. Blasting accomplishes the same purpose as deep plowing. Root expansion becomes easier and the soil is broken up; new stores of plant food are made available; the soil is aerated and the movement of moisture promoted. In short, the tree is given a chance for its life by giving it favorable environment in which to grow and perform its function of making fruit.

Touches That Count

THE gateway shown in the picture is attractive but not expensive. The two top ornaments, for instance, were made on the farm at a cost of only 10 cents apiece. They are made of concrete,



as are also the posts themselves. A coat of whitewash supplies a glistening whiteness.

The gate hinges and the three eyebolts seen at the right-hand side of the picture were embedded in the concrete when the post was made. To fasten the woven wire you just put an inch pipe through these bolts and attach the wires to the pipe. A board hung from the bottom of the gate keeps out hogs.

Long-Lived Auto Paint

By Frank Orr

WHY spoil the life and finish of the paint on your car by improper washing and cleaning before it has had but a few months' use?

Make sure the mud is softened by a gentle application of water before any effort is made to clean the surface of the paint. When the mud, even after it is softened, is forcibly knocked off with a

stream of water or rubbed off with a sponge or cloth, the grit in the mud acts like sandpaper and scours off the varnish and gloss.

A slow-moving current from the hose softens the mud and loosens it, and gradually carries away the layers of dirt without the friction effect.

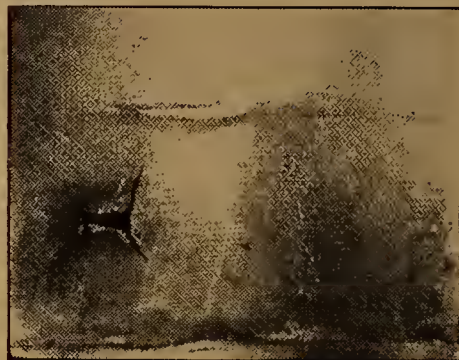
It is good cleaning economy to use separate sponges and cloths for cleaning the body and running gears, and make sure that anything used on the body of the machine is entirely free from grit and grease.

It pays big to use the best cleaning soap on the body of any well-finished car. When we see a car retaining a better finish after a couple of years' wear than one of the identical kind in use only a few months, the importance of careful cleaning is brought home to us.

A Bad Stone Bruise

THIS tire was bruised by running over a sharp stone. The stone caused the tire fabric to break on the inside of the casing. This break in the fabric in turn gradually pinched or wore the inner tube so that it allowed the air to escape. When this was discovered, a patch was cemented upon the casing to cover the broken edges of the fabric and protect the fresh inner tube.

The size of the patch is indicated by the dark stain on the casing, as shown in the photo, though when the photo was



taken the patch had been removed. Such a patch will usually prevent the inner tube from being pinched until the casing can be permanently repaired by vulcanizing. A stone bruise is much more likely to occur in casings not properly inflated so as to resist the small objects in the road. The best preventive is proper tire inflation combined with careful driving.

Women Checker Players

FARM AND FIRESIDE'S checker tournament, which began last March, is now showing up the strong players. For the benefit of new subscribers, we may explain that the games are played on numbered boards, and the moves are sent by post card. Thus far 78 players have finished one or more games, and are contestants for the final honors. Among those who have won two or more games and are still unbeaten, are: N. P. Morgan, Alvada, Ohio, 3 wins. Chas. Woolensnyder, Springfield, Ohio, 3 wins. L. P. Robinson, Springfield, Ohio, 3 wins, 1 draw. (Mr. Morgan is now playing Mr. Woolensnyder.) J. L. Ingersoll, Milford, Michigan, 2 wins.

Twenty-two players in sixteen different States, and one in Canada, have each won a game and have neither lost nor been played to a draw.

The method of playing by correspondence is new to practically all of the players, but no difficulty has been experienced, and most of the games have been close, twelve being drawn. Six women are in the tournament, and two of them are still unbeaten.

To Raise Better Walnuts

THE California Walnut Growers' Association is about to open a by-products plant in Los Angeles, where inferior nuts will be worked over into various commercial articles. By rigid exclusion of all poor nuts the association intends to raise the quality of walnuts.

It is also preparing cartons having transparent openings, so that the consumer can see what he is buying.

A Score for Each State

THERE are now employed an average of a score of county agents for each of the forty-eight States of the Union, or a total of one thousand of these more or less trained farm advisers going up and down the counties in the interest of better farming.

As time passes, it is found that most farmers are quite willing to hear what these scientific fellows have to say about farm improvement, even though many of their recommendations cannot be carried out "right off the bat" without prohibitive expense being incurred. The county agent is making good.

E

That's No Imitation—That's "BALL-BAND"

When you see the bright, round Red Ball you know you are getting "Ball-Band" Rubber Footwear. It's worn by eight and one-half million men. Sold by over 50,000 dealers. "Ball-Band" boots are vacuum cured. During the vulcanizing this process causes a tremendous pressure on the fabric and rubber and makes the boot one solid piece. They will give longer wear at a lower cost per day wear than any kind you can buy.

"Ball-Band" Arctics are also made in sizes for women and children. If your dealer can't supply you, write us, we will see that you are fitted.

Free Booklet "More Days Wear" tells how to make your rubber footwear last longer.

MISHAWAKA WOOLEN MFG. CO.
305 Water St., Mishawaka, Ind.
"The House That Pays Millions for Quality"

TELL TOMORROW'S

White's Weather Prophet forecasts the weather to 24 hours in advance. Not a toy but a scientifically constructed instrument working automatically. Handsome, reliable and everlasting. **An Ideal Xmas Gift** Made doubly interesting by the little figures of the Pagan and his good wife, who come in and out to tell you what the weather will be. Size 6 1/2 x 7 1/2, fully guaranteed. Postpaid to any address in U.S. or Canada on receipt of \$1. **Agents Wanted** DAVID WHITE, Dept. 15, 419 E. Water St., Milwaukee, Wis.

Sunshine Lamp 300 Candle Power FREE

To Try In Your Own Home Turns night into day. Gives better light than gas, electricity or 18 ordinary lamps at one-tenth the cost. For Homes, Stores, Halls, Churches. A child can carry it. Makes light from common gasoline. No wick. No chimney. Absolutely SAFE. **COSTS 1 CENT A NIGHT** We want one person in each locality to whom we can refer new customers. Take advantage of our SPECIAL FREE TRIAL OFFER. Write today. AGENTS WANTED. **SUNSHINE SAFETY LAMP CO.** 648 Factory Bldg., Kansas City, Mo.



No Eggs—No Pay

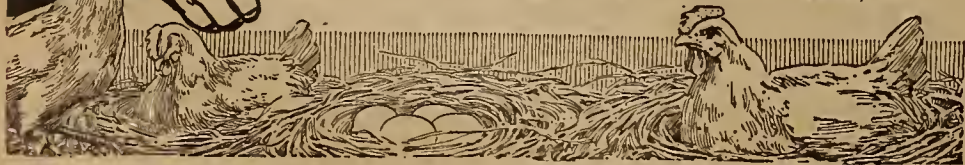
What more can I offer you?
GILBERT HESS, M. D., D. V. S.



The lack of green stuff, bugs, worms and exercise cuts down the egg supply during winter. Your hens must have a tonic or they won't lay; their egg organs will be dormant and the hens grow fat and lazy. Here is my "no-egg—no-pay-guarantee": So sure am I that

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A Tonic—Not a Stimulant will help to keep your poultry healthy and to make your hens lay, that I have told my dealer in your town to supply you with enough for your flock and if it doesn't do as I claim, return the empty package and get your money back. 1 1/2 lbs. 25c; 5 lbs. 60c; 12 lbs. \$1.25; 25-lb. pail \$2.50 (except in Canada and the far West). **If not at your dealer's, write** DR. HESS & CLARK Ashland, Ohio



Good-Health Talks

Suggested by Questions from Our Readers

By DAVID E. SPAHR, M. D.

The Retired Farmer



THE farmer who by industry and economy and good business management has accumulated, not a fortune, but a competence, has undoubtedly earned the right to retire from active duties and enjoy the fruits and rewards of his toil. He is entitled to a peaceful, happy, cheerful old age. But in reality, does he get it?

My experience is that often he does not. This consummation, so devoutly to be wished, eludes and evades him. His visions of rest and peace and uninterrupted comfort are not fully realized.

The abrupt change from an active member of the producing class to an idle member of the consuming class is too much for a man who is facing the setting sun. And just here is the excuse and reason for this article. I want to sound a note of warning to those contemplating such a move: "Safety first." You understand, to a man in the decline of life, whose arteries are already beginning to harden from indulging in rich and stimulating food, the change should be made gradually, allowing his system to accustom itself gradually to the changed conditions. A lessened amount of rich and stimulating food should be indulged in. Regular hours must be maintained; regular exercises that will bring into play, and actively, all the different muscles of the body in order to insure the elimination of the waste products of the body.

A sedentary life, inactive and purposeless, with nothing to live for, no object in view but to live and eat and wait and waste away; with a lessened income and greater expense; with more and greater demand upon the purse strings—how great the temptation to become restless, nervous, irritable, and grouchy, which is equivalent to becoming sick.

If you leave the farm and go to the village, make yourself helpful. Be cheerful, pleasant, and obliging, and you will be healthier, happier, and more religious, and will be beloved and blessed by all.

Possibly la Grippe

Miss M. J., Missouri: "I am suffering with a severe pain in my right eye. The eye appears to be normal except for pain back of the eyeball. What is wrong?"

Answer: From your brief description we should infer that the trouble is not in the eye, but in the nasal passages. Perhaps you are suffering from neuralgia due to la grippe. Take some anti-cold tablets and use a nasal spray.

Foot Troubles

Mr. J. W., Indiana, writes: "I am bothered with bad-smelling feet. Am compelled to wash my feet several times daily. Tell me of a remedy."

Answer: I am sure anyone afflicted as you are will appreciate a remedy that will cure the trouble. Put one-half dram of potassium permanganate in a basin and add water to make a footbath. Allow your feet to soak in it for ten minutes every night before retiring. This will not only destroy offensive odors, but it will check the excessive perspiration responsible for the odor in the first place.

You might get a dusting powder composed of one dram of salicylic acid to two ounces of powdered boric acid, and dust in your socks every day. Change your socks daily and have several pairs of shoes and change them frequently. Please report to me your success or failure.

A Case of Heartburn

Mrs. A. K., a farmer of Missouri, wants to know a cure for heartburn.

Answer: A teaspoonful of phosphate of soda in a glass of warm or hot water taken before breakfast will relieve the acid eructations which cause heartburn. It will also liquefy the bile and increase the activity of the liver by loosening the bowels. It should be repeated before each meal, or supplemented by taking from three to five soda mint tablets after meals.

St. Vitus' Dance

"My boy, aged eight years, who has always been healthy, has developed a bad habit of batting his eyes almost constantly. It is worse when being observed. His face also jerks, and he makes peculiar grimaces, and appears awkward as he drops things occasionally. Scolding or punishing does not stop him

in the least. How can I break him of this habit?"

Mrs. O. R. I., Kentucky.

Answer: Stop the scolding at once, as the trouble is involuntary and beyond his control. He is in the first step of chorea, or St. Vitus' Dance. Keep him out of school. Don't appear to notice his contortions. Be firm but kindly toward him, and send for your family physician. The normal course of the disease is about

eight to twelve weeks, when he will recover unless the disease is complicated with rheumatism or an inflammation of the inside of the heart.

Chorea is usually a functional nervous disease characterized by aimless, irregular movements of any or all the voluntary muscles of the body.

Your boy may become unable to feed himself or walk, but don't despair, the chances are that he will get well in time. I could outline a treatment, but think you had better send for your family physician at once.

Sore Throat—Look Out!

A young lady of South Carolina writes: "How can the average person distinguish between true diphtheria and tonsillitis?"

Answer: They absolutely cannot. And neither can a physician without a chemical and microscopical examination to find the germ. The disease may be extremely mild and yet severe enough to infect everyone exposed. The throat may be perfectly clean and the membrane be located in the larynx and the child die of diphtheritic croup. Don't tamper with a sore throat!

Good-Health Notes

Remember that the delicate, impressionable nervous system of your child renders it liable to feverish attacks that would not affect an adult.

Your child may be backward in books, but will do well in manual and industrial work.

The battle is on between Health, Hygiene, and Happiness and Disease, Dirt, and Discomfort. Which are you with, the three H's or the three D's? Think about this.

The more we study about alcohol and drug addiction, the more we realize the importance of giving to persons thus afflicted sympathy and wise care rather than punishment.

Abnormal Appetite

Mrs. Jones, mother of an eight-year-old boy, writes me as follows: "My son, a bright, kind and obedient boy, has such an abnormal craving for meat that he will hardly eat anything else. He will make a full meal of meat if I will allow him to do so. What would you advise?"

Answer: It has been my experience that boys with an unnatural craving for meat soon develop a desire for coffee, tobacco, beer and, sometimes later on, whisky, morphine, etc. Evidently the boy has implanted in his nature a desire for stimulants or highly seasoned stimulating food. Study your boy, instill into him while young the importance of self-control. Have him curb these tendencies. Vary his diet. Give him nuts and fruits. Deal kindly and gently with him. Outdoor air and exercise with a varied diet and his co-operation will save your boy.

Numb Feet and Legs

I wish for a little advice from you in regard to my husband, who is troubled with a numbness of the feet and legs. The trouble began about two years ago in his toes.

Mrs. E. A. M.

Answer: If numbness of the feet and legs is accompanied by an unsteady gait or difficulty of getting about in the dark, I should be almost sure that your husband were in the first stages of locomotor ataxia.

Why People Vomit

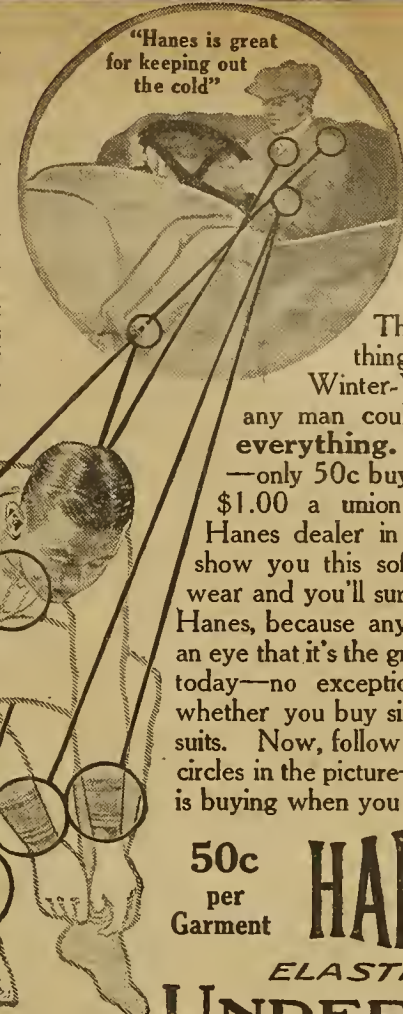
"What can I take to settle my stomach and stop my vomiting?"

F. JONES, Michigan.

Answer: Vomiting is not a disease, only a symptom. You do not give a complete description of your trouble. Describe your case fully. People vomit in the first stages of all eruptive diseases, measles, smallpox, with pneumonia, cerebral or brain trouble, or from an overloaded stomach or an overdose of medicine or an emetic, or fifty other things.

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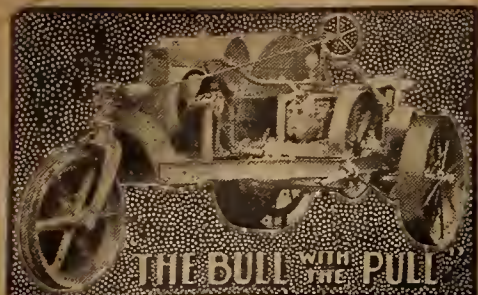
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Poultry-Raising

Good Feed for Eggs

A MASH recommended by the South Carolina Agricultural College for increased egg production is the following:

Cottonseed meal	100lb
Corn meal	50
Ground oats	50
Wheat bran	50
Wheat shorts	50
Ground lime rock (fertilizer lime)...	16
Ground charcoal	12
Salt	2

No animal protein is supplied by this mixture, but it is the experience of the majority of poultrymen that a reasonable quantity of beef or fish scraps or fresh ground bone is essential even when cottonseed or linseed meal is fed, if the heaviest egg yield is to be secured. Poultrymen will find it an interesting experiment to try feeding this mash both with and without some form of animal protein.

Filling the Egg Basket

W. L. ROBINSON, editor of "The National Barred Rock Journal," says editorially: "We should like to see on the committee when the next change in the standard for Barred Rocks is made the proprietor of the poultry-slaughtering establishment, the man who buys the poultry meat for a large hotel, and your wife or mother. They might not be so crazy over deep barring, black tips, low tails, et cetera. They would advocate something of practical value."

How to Rear Capons

By K. P. Frederick



Mr. Lynn

REARING capons, and producing and selling first-class eggs, is a profitable and pleasant work for Mr. Otis A. Lynn of Woodson County, Kansas.

"I had never seen a rooster caponized," Mr. Lynn said recently in speaking of his poultry work, "so I asked the poultry department of the College of Agriculture of the University of Nebraska at Lincoln for information."

They told Mr. Lynn that success in the capon business depended largely on the instruments used. He studied the instructions carefully, and operated on several dead chickens before starting to caponize any live birds.

"I penned up eight young roosters," continued Mr. Lynn, "and kept them off feed and water for thirty-six hours. This is necessary in order that the intestines of the roosters may become empty, so that one can see the organs to be removed. As soon as the eight birds were in condition, I operated on them, and only one died. This was not a loss, as



Well-developed capons

the bird was just as good eating as if I had chopped its head off. The next time I penned up more of the young roosters, and each time I operated I learned more. I had splendid luck right from the start, and that year caponized more than a hundred chicks and lost only a few, not enough to mention. All of these were good for eating anyway."

The capons belonging to Mr. Lynn grew rapidly during the winter on cane seed as the principal feed. When the capons were nine months old Mr. Lynn built a small pen in one end of his smoke-house, and put 22 capons in it, leaving an

opening in the pen so that they could eat from troughs on the outside of the pen. He kept plenty of water where the capons could reach it. He also kept during a 12-day period plenty of corn chop, soaked in milk, in the troughs. At the end of that time Mr. Lynn put the 22 capons into two coops and billed them to a produce company in Kansas City, Missouri. The capons netted \$1.05 apiece. Seventeen of the capons sold for 17 cents a pound, and five for 14 cents a pound, live weight. The five sold at a reduced price were not smooth capons. They were "staggy" and light in weight.

"Of course I did not strike the best capon market," the Kansan remarked, "but I was satisfied. It beats trying to dispose of the roosters in any other way. The caponizing is little trouble when one becomes proficient. I do not sell all my capons, as I want to keep some for my own table use, and others to use as foster mothers for my incubator chicks. When I started this I had only one hen that would claim chicks. I penned up four capons with chicks, and three of them claimed the little fellows as theirs and clucked and hovered over them in a fashion to beat any hen. Later I picked



A pet capon. This one took care of a brood of chicks

a capon right off the roost, put five chicks under him, and penned him up. The next morning out he strutted clucking to those chicks in a most hennish manner. He called and fed the chicks as if he had been doing it all his life."

Capon meat is tenderer and more juicy than young chicken, and the feathers of a capon are soft, fine, and glossy, and sell next to duck and goose feathers on the market, according to Mr. Lynn. One often has to take some fat off a capon before cooking it, instead of putting butter with it. His capons weigh ten pounds or more when mature. The newly made capons look little different for the first few months, but later they become much heavier. A hundred capons will not cause a farmer to take a price of seconds for the eggs his hens lay during the hot months, while one rooster will.

"My experience is that capons are unbeatable as foster mothers for chicks," declared Mr. Lynn. "In rainy weather the capons get their families inside the coop every time, while the fool hens have never yet made it to shelter in time. All of the chicks I have lost recently have been those I have intrusted to the care of a hen. The capons are not fussy, like the hens, and one will set right in the coop with his brother and the family and will not quarrel over the children."

Bury Poisoned Rats

A NEW MEXICO man was troubled by the killing of his chickens by rats, so he poisoned the rodents. The chickens found out how to eat the dead rats, and thereby the pests, like unto Samson, killed more in their death than they ever had in all their lives. Moral: Pick up the poisoned rodents and give your fowls a balanced ration.

CALIFORNIA is known as a great poultry-raising State, but Nebraska, Oklahoma, and Missouri poultry shippers are sending fully 500 cars of dressed poultry to San Francisco markets annually.

Salving the Lice

TWO leading experiment stations, Maine and Connecticut, use mercurial ointment to control lice and mites in poultry.

The Connecticut authorities make a salve by mixing equal parts of 50-per-cent mercurial ointment and vaseline, without heating, the two being thoroughly blended together.

The quantity for each adult bird is a piece the size of a grain of corn, smeared and rubbed in the skin over an area the size of a half-dollar, about half an inch below the vent. It is claimed that two or three applications a year will keep the poultry entirely free from lice.

This ointment kills not only the lice but the eggs, or nits.

The mercurial ointment can be procured from any drug store. A dime's worth of blue ointment will keep the body lice from fifty fowls for a year.

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The Rise of George Simmons

By C. H. LERRIGO, M. D.



SYNOPSIS OF PRECEDING CHAPTERS: *George Simmons*, the hero of this story, was determined to get ahead in this world. *Alice Gandy*, his sweetheart, was shown by the doctor who writes the story to be a carrier of typhoid fever. *John Gandy*, cousin to Alice, opposed the match at first, but when George showed his heroism in stopping the ravages of a mad dog, John Gandy turned in his attitude and helped them plan their wedding. But, first, George must stand a test, and Alice must make a confession. This chapter tells about them.

Chapter V—Wedding Plans

NO ONE can deny that when John Gandy does anything it is very thoroughly done. So I was not surprised that when he began to make amends to George Simmons he did it very completely. As a matter of fact, he almost overdid it, and when he began to intimate that it was his royal pleasure that the wedding should be forthwith if not sooner, Mistress Alice became as indignant as she had previously been about his reverse attitude.

There was really no hurry about the wedding, as I tried to point out. George was obliged to complete his course of anti-rabid vaccine for one thing. This did not extend beyond the customary three weeks, and I may as well say right here that it was quite successful and added no little to my local fame. I might add that it was equally successful with Bull.

My treatment of Alice was practically complete, so one morning, in anxious expectancy, I forwarded to the state bacteriologist another specimen for examination.

I have seldom been as anxious for a report on any case, but I need not keep you in the suspense which tortured me. The report was negative!

Victory perched proudly on my banners!

I was not content with a blood examination. I followed it up with all the known tests for typhoid. And all were negative.

Not only was Alice relieved of the humiliating and distressing condition, but I had accomplished a great work. I had demonstrated a treatment whereby, in something under ninety days, a person afflicted as a carrier of the typhoid germ might be wholly cleared of the charge. I was in a fair way to become famous.

I heard soon that the wedding was to be in November. It was hastened a little because Mrs. Simmons and the children were coming to town and George would be left to shift for himself.

He came into my office one day shortly after, and I noticed that since he had become the personal property of one enterprising young lady his appearance had so greatly improved that he no longer seemed such a bad match for her. He was almost as embarrassed as he had been that other time.

"How are you feeling, George?" I asked.

"Fine as can be," he said. "I don't think that there's a thing the matter with me and I want your word in writing for it."

"I don't quite understand. What's the occasion?"

"The preacher says he has to have it," he explained as a deep red crimsoned his face, so great was his confusion.

"You'll have to tell me some more, George," I encouraged him.

"Well, you know what I had to see the preacher about, don't you?" he asked.

"I have a dim suspicion. I think I could hit it in ten or fifteen guesses."

"Well, of course I went to Mr. Frank, and he's a great follower of Doctor Sheldon, you know, and whatever Doctor Sheldon does he thinks he has to do."

"A mighty good lead to follow, I'm sure," I said in hearty approval, for, like all Kansas people, I am an ardent admirer of the author of "In His Steps."

"Well, did you know that Doctor Sheldon would not perform the marriage ceremony for any person unless he brought physician's certificates to show that he were in fit physical condition?"

"And a mighty good requirement it is, too. It won't keep you from getting married, will it?"

"Not unless a dog-bite is a permanent injury. That's the worst thing I ever had."

"You are quite sure of that?" I asked, looking him directly in the face, keenly and meaningfully. "Nothing else ever bit you?"

"Never a bite, Doctor. I've been barked at a number of times and I've more reason to be thankful that I escaped than proud, but I'm sure I'm clean. You may search me."

I did, too, and I did a thorough job of it. One of the most horrible things in life is the possibility that a sweet, clean young girl like our fair Alice can be made a physical wreck by marrying some good-natured and apparently decent young fellow who in moments of idle foolishness has contracted a disease which lingers with him and is transmitted by him to her.

When I gave young George a certificate that would be satisfactory to Mr. Frank or Doctor Sheldon, either one, it was well earned.

The wedding was a Thanksgiving Day affair. We had been fortunate enough to have some early snow, and it had packed down enough to make good running for the automobile. The day was delightfully bright and crisp.

We reached the house early, but I found Doctor Belden already there. I shook hands with her cordially.

"It is very appropriate that you should be at this wedding," I assured her. "But of course you don't know just what share you have had in making it possible."

"Oh, I know they couldn't have had it without me," she said, laughingly. "I've known Alice ever since she was a baby. She came from my town, you know."

"Yes, I remember she spoke about it. Well, I shan't be bothering you so much with blood tests for typhoid reaction, possibly, for a time."

"Oh, you haven't bothered me at all, Doctor." I thought she looked rather surprised.

"I have a most intensely interesting thing about typhoid that I am arranging to write up," I continued, "and I hope I shall be able to get some assistance from you."

"I shall be glad to help you, Doctor. Let me know what I can do."

There was an hour before the ceremony. George hadn't yet appeared. Of course Alice was in hiding, as is the custom but I am very familiar in the Gandy household and I happened to wander into the room in which she sat. "Hiding, are you?" I cried.

"Doctor, I'm so glad to see you," she said, coming forward. "I have a great secret on my mind. It's about my having typhoid. You know," she hurried on, pushing me into a chair, "I heard you tell John, that first day, about having sent in my drop of blood without getting a reply from Doctor Belden."

"Yes," I interrupted, "that was the day before I got my first positive report—the report which led to the induction of the treatment which has made you well and your physician famous."

"Yes, Doctor dear, but you don't care about fame, do you? You care more about my being well and happy?"

"Of course I do, my dear girl."

"Well, I called on Miriam Belden the very next morning after that Sunday dinner, to get her to satisfy my curiosity."

"And she did?"

"No, she was out. But she would have done anything else I asked her had she been there. She isn't the kind of a doctor to set more value on a lot of old dry reports to mildewed societies than on the happiness of a friend."

"Why, my dear Alice, what are you driving at? Surely you aren't jealous of my monograph on 'Typhoid Carriers,' which isn't even written yet."

"Doctor, you don't care much about writing that, do you?" she pleaded.

"Why, it won't hurt you, Alice," I parried. "You know I shall use no names."

"But, Doctor, wouldn't you be willing to give that up for my sake?"

The best way I know to evade an unwelcome request from a woman is to change the subject. [CONTINUED ON PAGE 18]

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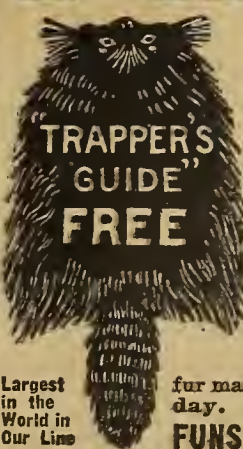
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The winnings of Western Canada at the Soil Products Exposition at Denver were easily made. The list comprised Wheat, Oats, Barley and Grasses, the most important being the prizes for Wheat and Oats and sweep stake on Alfalfa. No less important than the splendid quality of Western Canada's wheat and other grains, is the excellence of the cattle fed and fattened on the grasses of that country. A recent shipment of cattle to Chicago topped the market in that city for quality and price.

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The Rise of George Simmons

[CONTINUED FROM PAGE 17]

"You are forgetting what we are talking about, Alice," I said cheerfully. "You have left your secret all untold and me aflame with curiosity."

"Well, sit still anyway, Doctor. As I told you, Doctor Belden wasn't in her office, and I sat down to wait. Now listen, for I'm going to tell."

"What is this all about, Alice?"

"Miriam wasn't in, and I sat down to wait, and a letter to a doctor lay on her desk, telling him she had examined some blood and found a positive reaction. Then a wicked thought flashed into my head, and I just called you up on the telephone and told you that the diagnosis in my own case was typhoid fever. You didn't recognize my voice a bit, did you?"

As this confused jumble came tumbling forth a slow wave of comprehension swept over me.

"Doctor dear!" She was kneeling on a footstool by my chair in all her wedding finery and her arm which had been on my left shoulder stole around to my right. "You won't tell John anything about it, will you? I'm a miserable wretch, Doctor, just as you so very properly say, but it meant so much and it seemed such a good way, and I did want to take old John down a step. You won't tell him, Doctor?"

What a wonderful strength lay in that delicate arm, to be sure.

"Well, if you will never, never do such a thing again, and if you'll be sure to say nothing to anyone about the paper I was to write, I'll consider it."

The door opened with a whirl, she got to her feet, and before I knew it a bouquet of bridal girls had whisked her off.

I sat in my chair alone, closed in by the crumbling walls of my castle of fame. This girl, this innocent, fairy-like Alice, had actually falsified, forged, the reports of the bacteriologist, and for the sake of lifting from George's shoulders to her own the blame which John Gandy absurdly imputed to the Simmons family, had made herself appear as a typhoid

carrier, when her blood in reality had been free from the disease. My "cure," of course, amounted to nothing, inasmuch as Alice was healthy before it began. [THE END]

The Every-Day Life

By Edgar L. Vincent

ONE of the fine things done at the recent commencement time was at Michigan University when the president of the great institution called before the crowded auditorium an old man and bestowed upon him an honorary degree of the highest value. Before he handed the parchment to this plain little old man, the president gave a scrap out of the life-story of the faithful worker. He said that years and years ago he began building railroads away up in the wilds of the Wolverine State. Quietly, unobtrusively, faithfully he had been going on all the years since, unheard of by men, and yet doing a work which well entitled him to the recognition which was to be placed upon him, now that his shoulders were bowed with the weight of years and his hair threaded with silver.

"And now, sir, I bestow upon you, the Master Builder, the degree of Master in Engineering!"

What wonder that the words of the president brought forth such rounds of applause that the very roof shook! This was the old man's crown won by a simple every-day life.

It does not come to all in the way it did to this old man. Some men and women never are thus honored; and yet, their crown is no less secure. If it does not come in parchment, it surely will take form in the love and lasting remembrance of those who know how the years have been spent, for faithfulness counts and self-sacrifice is too beautiful a thing to pass unnoticed.

The piece of paper placed in one's hand by the highest official of the greatest university in the world will one day be lost in ashes, but the real honor will last—the honor of a plain, simple, earnest life.

About the Next Issue

Why His Farm Was Attractive

HE HAD the best-looking farm in the township. And he didn't seem to spend much time fixing it up either. He said it didn't cost very much to keep his buildings in the best of repair. How did he do it? That was what interested and baffled his neighbors. B. D. Stockwell answers the question in an interesting way in an article, "Fire-proofing the Farm," in the next issue, the Christmas number.

Are You Losing Your Hearing?

If you are deaf or hard of hearing you will be interested in the answer Dr. David E. Spahr gives a subscriber who asks, "How can I regain my hearing?" You will find it in Good-Health Talks in the next issue.

Christmas Eve on the Farm

That it is the best Christmas Eve farm scene taken in recent years we leave to your judgment. And you will not have to wait long to see it, because it is the cover picture of the Christmas number—which appears December 18th. Another reason we are proud of it—the photo was taken by one of our readers.

How to Make Your Housework Easier

The old saying, "Woman's work is never done," isn't true in many farm households now. When Dora became Mrs. Delaven, she started housekeep-



The best-looking farm

ing with her kitchen arranged as kitchens had been arranged for generations. And she never had any time to rest. It was work, work, work. Now her work is nearly play, and she has time for other things. But that kitchen doesn't look like it did when Dora first came there as a bride. Avis Gordon Vestal tells about Dora's kitchen in the Christmas number, which is the next issue.

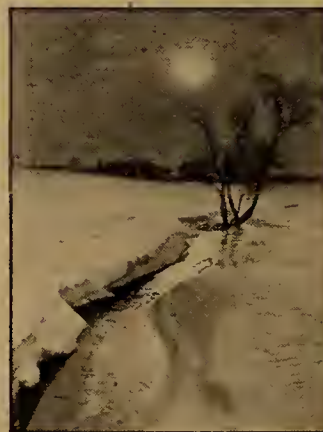
Girl Trifles With Lunatic's Love

"Hide me quick," Lucy gasped. "Crazy Charley's coming with a long knife. Just in fun I asked him to marry me, and to-day, when everybody had gone to the Grange, he came to be married. When I wouldn't go with him he tried to kill me. I got away from him by taking to the woods; but—oh, dear! I hear him coming." Crazy Charley emerged from the woods as Lucy climbed to the top of a corner.

"I see you, you lvin' hussy," he screamed as he rushed toward the girls. Mrs. H. B. Ellsworth relates in the next issue, under "My Narrowest Escape," what Lucy and her two girl friends did when Crazy Charley came.

Do Your Children Want to Move to Town?

How to keep the boys and girls on the farm is a problem that troubles many parents. John McCallum solved the problem so completely that five sons and four daughters can't see any reason for moving to the city. The plan is so simple that every farmer can take it unto himself to solve his problem. A. E. Richter explains the plan in the second installment of "Happiness, Incorporated," which appears in the next issue.



The Christmas cover



Dora Delaven's kitchen

What Men Wear

New Fall Styles Suggest Christmas Gifts

By MILLARD SANDERS

ALTHOUGH we men don't have to worry about whether our clothes are right up to the minute in style and fabric, like the women-folk do, we do have to keep up with the clothes procession. Well-dressed men are clothed conservatively.

It is a difficult thing to explain, but the well-dressed person gets more respect and better treatment in a business way from his friends and from strangers than his neighbor who is careless about his dress.

The clothes question resolves itself into two parts: work clothes and wearing apparel for dress. Style isn't a factor in work clothing, like with other garments. Because they are more shapely, the fall models of work clothing will fit better, feel more comfortable, and wear longer.

A complete outfit of good, well-made, wear-resisting, warm work clothing can be purchased from trustworthy merchants for from \$15 to \$22, depending on the quality. A complete outfit of clothes for dress-up wear—overcoat, overshoes, and all—can be bought for \$50 to \$75.

Full-sized, form-fitting underwear in all styles, materials, and colors, are priced from \$1 to \$4 a complete suit. Sox and handkerchiefs haven't changed a bit in either materials or prices since last fall.

Work trousers priced at \$1 to \$2 a pair come in cotton and wool mixed cassimeres and worsteds in a variety of colors and patterns. Corduroy trousers are shown in the usual colors from \$1.50 up. Dress-up trousers of the better grades are offered at from \$2 to \$5 a pair.

There are no changes in belts and suspenders. Prices range from 25 cents to more than a dollar. The younger men wear more belts than suspenders. Garters in all colors are priced at from 10 to 50 cents.

Heavy, water-proofed high top shoes cost from \$3.50 to \$7. Price varies with quality and workmanship. Felt boots of the better quality run about \$1.50, and rubber arctics for them are priced at \$1.50 to \$2. Heavy arctics to be worn over high-top shoes can be bought for \$2.

Shoes run to English lasts, although a few styles are offered with high bump toes and high heels. Round toes and low heels are favored by many makers. Both button shoes and cloth-top shoes are on the market. An equal number of black and tan model shoes are shown.

Cut Shirts Coat Style

Both dress-up shirts and work shirts are cut in the easy-to-put-on coat style, which opens down the front. Colors and materials in work shirts haven't changed. Prices run from 50 cents up. Dress-up shirts of the better grades can be bought with either stiff or the French soft cuffs at from \$1 up.

Overalls and jumpers to match haven't changed in either styles or materials.

Caps and hats are offered in a variety of materials and styles at prices from \$1 to \$5. One of the popular styles in fur caps is one without a visor. It comes in dog-skin, muskrat, and sealskin, and sells for from \$2 to \$5. Cloth caps run to big shapes. A good knit stocking cap can be bought for 50 cents.



Well-dressed men don't wear clothes that are conspicuous

Soft hats still lead the stiff hat in popularity. Prices range from \$2 to \$5 for the better grades. The styles are a slight modification from the hat styles of last spring. Blacks with a few browns are the colors shown in stiff hats. Soft hat colors run in gray, pearl, green, brown, and black.

Neither dress-up gloves nor work gloves have changed in colors or materials. The prices are the same as last fall.

Melton reefers with large storm collars made of cloth running from 30 to 32 ounces in weight to the yard are quite popular this fall as work coats. They are quoted at from \$4.50 to \$7.50. Many of them are lined with sheepskin and have a sheepskin collar. The coats are cut 34 inches long, and are shown in dark colors. A variety of styles, weights, lengths, and patterns are offered

in other work coats at from \$1.25 to \$12.50. Mackinaws in all colors are priced at from \$3.50 to \$10. Heavy work vests can be bought at from 75 cents to \$2. Corduroy suits are priced from \$8 to \$15.

Sweaters, sweater coats, and sweater vests come in many designs and colors. The prices range from 50 cents to \$7.

Change Suit Models Slightly

The styles shown in men's and boys' suits this fall are very little different from those shown last spring. Both single- and double-breasted models are shown. The single-breasted model is the more popular. The lengths of the coats are the same. The shoulders have little or no padding. The vests haven't been changed.

Many of the fall coat models have patch pockets. A few of the models made up of the heavier weight cloths are not full lined. The trousers are straight and narrow, although there is plenty of room for freedom of movement. The trousers are cut a little fuller through the hips, and there is more knee room. The bottoms of the trousers run from 17 to 18 inches in most of the styles. A 1½-inch cuff is the correct size cuff to wear on trousers. Many of the fall models are shown without cuffs.

Cassimeres, chevots, and other soft-finished materials predominate the suitings. Dark gray, blue, brown, black, with a myriad of green and red mixtures, are the most popular colors. From \$15 to \$30 will buy the better grades of either ready-made or made-to-measure dress-up suits.

Colors in neckwear haven't run riot as much this fall as last spring. The four-in-hand and bow ties are running neck and neck in popularity. The stand-up, turn-over collar, with plenty of tie room in front, is the popular collar for fall.

Overcoats run to double-breasted models, although many single-breasted models are shown. Cloth coats are shown 42 to 52 inches in length. The prices run from \$10 to \$35. Fur coats come in all furs, with cowhide, raccoon, and muskrat leading. They have large shawl collars, quilted body linings, leather arm shields, deep cuffs, knit sleeve wristlets. The calfskin coats sell for \$30 to \$35. The Galloway coats are offered at \$30 to \$40. The raccoon coats sell at \$60 to \$100.

Because they are more shapely, the fall models of work clothing will fit, feel, and wear better



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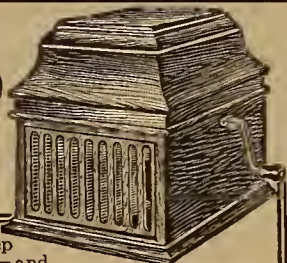
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ONCE upon a time there lived in Pussy-land three little kittens called Toddles, Waddles and Coddles. They lived in a little brick house, together with their mother, White-face, who was very proud of her three little kitten children.

Now Toddles, Waddles, and Coddles were three of the nicest little kittens you ever met—that is, if you met them away from home. They never forgot their manners when they went visiting, and were as pleasant to all other pussy-cats as they could possibly be.

They always said, "Thank you" and "If you please," and they never once thought of quarreling among themselves. No matter where Mother White-face took them, she never had any occasion to scold them.

But at home they were quite different. They were just as lazy as lazy could be, and no matter what Mother White-face asked them to do, they would always want one of the others to do it instead. Toddles would say, "Let Waddles do it," and Waddles would say, "Let Coddles do it." And it was the same way with Coddles.

One day Mother White-face called the three little kittens to her and told them she was going away for several days and that they would have to keep house all by themselves while she was gone.

"I hope that you'll be good while I am away," she told them, "and do just as I tell you."

The three little kittens promised faithfully to do everything just as she told them.

"Toddles will sweep the house while I am gone," said their mother, "while Waddles will go to market, and Coddles will attend to the baking."

At this the three little kittens fairly clapped their paws with delight, while they all started in to purr as hard as they could purr. It was the first time their mother had left them all alone, and they felt sure it would be the jolliest kind of fun to do all the work by themselves.

"And last of all," finished Mother White-face as she kissed each little kitten good-by, "be sure and lock the door when evening comes or maybe Old Gray Wolf will come snooping around and find you all alone."

All the little kittens of Pussy-land were terribly afraid of Old Gray Wolf for fear he would come around and catch them when they had not behaved. And the three little kittens promised to see that the door was securely fastened each night before they went to bed. So Mother White-face went on her way rejoicing, feeling sure that her children would take good care of everything during the time of her absence.

The next morning the three little kittens awoke at the same time. The sun was shining brightly through the window, and everything outside seemed to be calling to them to get up. But these lazy little kittens did not want to.

They All Wanted to Sleep

"I THINK I'll stay in bed a little while longer," said Toddles to her two sisters as she turned over to go asleep again. "Mother's away and we can sleep just as long as we want to."

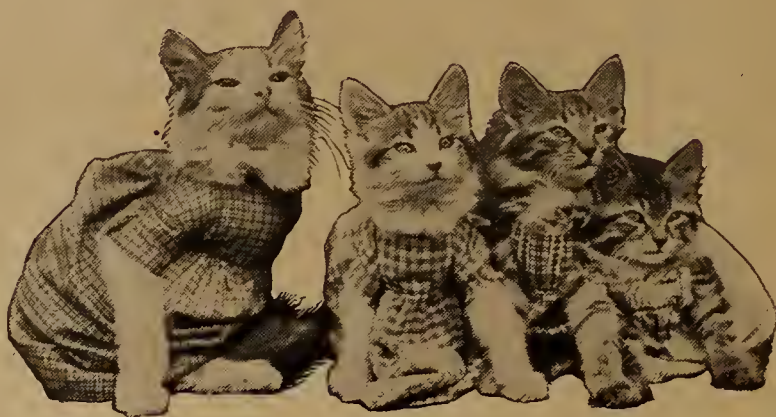
Waddles and Coddles both gave a yawn and thought too it would be very foolish to get up at their usual time, especially as their mother was not there to find them out.

It was nearly dinner time when the three lazy kittens finally got up. First of all they had a bowl of milk, together with a big slice of bread, after which they all decided to go out and play.

"We will have plenty of time to do the work to-morrow," said Toddles, "and Mother will never know the difference."

Both Waddles and Coddles at once agreed that it would be very foolish to do the work at once when the following day would answer just as well.

That night before the three little kittens went to bed they first saw that the door and window were securely fastened. But they had hardly gotten into bed before they heard a noise



White-face and her three children

that nearly scared them out of their wits.

"Woo-o-o-f!" it went just outside the door. "Oh, dear!" whispered Toddles, shaking all over, "What's that?"

"Oh, dear! Oh, dear!" repeated Waddles and Coddles together. "What can it be?"

"It's only the wind howling outside," explained Toddles after they had listened a while and heard nothing more.

"Yes, it's only the wind," agreed Waddles and Coddles.

But all the same these three little kittens cuddled just a little bit closer to each other, and pulled the bed cover just a little bit further over their heads, for the noise they had just heard sounded for all the world like Old Gray Wolf snooping around outside.

The next morning the three little kittens slept as late as before, and after they had eaten their dinner went out to play, with never a thought of the work they had to do. They thought their mother would never find it out, as they could easily do everything the next day.

Which Kitten Was the Lazy One?

THAT night they even neglected to lock the door and never once thought of it until they were all cuddled up in bed. "You forgot to lock the door," said Toddles to Waddles. "It was your turn to-night."

"It's no such a thing," denied Waddles, "for I did it last night."

"No, you didn't!" flung back Toddles in an angry tone. "It was Coddles and me. And if you weren't so lazy you'd get up and do it!"

So for several minutes these three little kittens grumbled and growled about whose turn it was. But not one of them offered to get up to do it. And then all of a sudden they heard the same fearful noise that had sounded outside the night before.

"Woo-o-o-f!" it went. But Toddles, Waddles, and Coddles were not nearly so frightened as they had been before, for they all thought it was only the wind.

Just as they had settled down to go to sleep the door was flung open with a crash, and who should walk in the room but Old Gray Wolf himself! He looked terribly cross, especially to three lazy little kittens who had neglected to do what their mother had told them.

"Oh, dear, kind Mister Wolf," begged Toddles, "if you'll please not hurt us we'll be ever so good and do anything you want!"

"Oh, please, Mister Wolf!" pleaded Waddles and Coddles together, shaking so hard that the little bed quivered all over.

"You're nothing but three lazy, good-for-nothing kittens!" growled Old Gray Wolf. "And I've a big notion to snip your heads right off!"

"Oh, dear! Oh, dear!" wailed the three little kittens.

"If you'll promise to do your work the first thing to-morrow morning," decided Old Gray Wolf at last, "I'll let you off this time. But remember, the first time you're lazy again I'll surely come around and do it!"

"We'll never be lazy again," promised the three kittens.

"See that you're not!" growled Old Gray Wolf as he stalked out through the door and was gone.

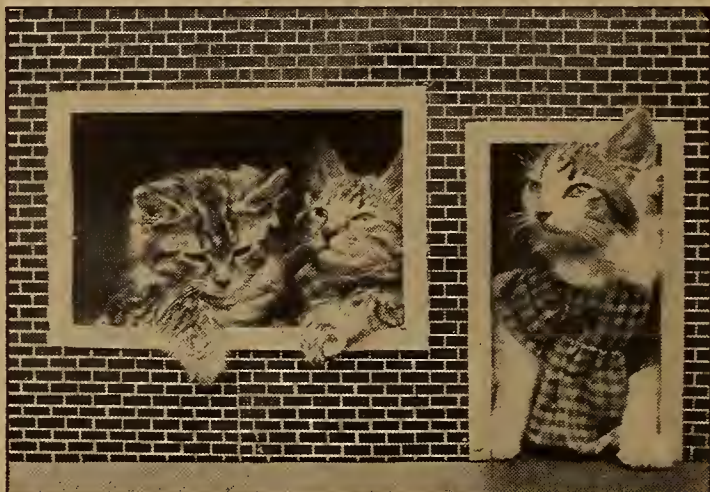
The next morning, bright and early, the three little kittens were out of bed like a flash and, as soon as they had eaten their breakfast, started in to work.

The following day, when Mother White-face returned, she was overjoyed at the way her three little kittens had done their work.

But when she came to praise them, each little kitten hung its head in shame and then started in to cry.

"We'd never have done a thing at all," sobbed Toddles, "if it hadn't been for Old Gray Wolf." And in a very few moments Mother White-face knew everything just as it happened.

"And we'll never be lazy again, Mother dear," promised the three little kittens. Nor were they.



They lived in a little brick house



Waddles went to market



Toddles swept the house



Coddles did the baking

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No. 2931—High-Neck, Long-Sleeve Nightgown. Cut in 32, 36, 40, and 44 bust sizes. Price of pattern, ten cents

No. 2906—Apron in Housedress Style. Cut for 32, 36, 40, and 44 bust sizes. Price of this apron pattern, ten cents

No. 2932—Four-Gored Skirt in Two Styles. Cut in 24 to 34 waist measures. Width, three yards. Price of this pattern, ten cents

No. 2893—Waist with Sleeveless Overhous. Cut in 34 to 42 inch bust. Price of this pattern, ten cents

No. 2894—Two-Piece Skirt with Yoke. 24 to 32 waist. Width at bottom, three yards. Price of pattern, ten cents

How to Iron

Smooth Clothes Made Possible by Forethought

By JANE B. WING

A GOOD many years ago, when I was a young lass, I was invited to have supper and to spend the night with a friend of my mother's. Mrs. Hawley was a cultured, refined woman, much engrossed in the care and education of her children, and till then I had supposed the maid took upon herself the general housework. But after the dining table was cleared, Mrs. Hawley asked me to go with her to the dining-room while she sprinkled and folded the clothes.

The whole proceeding was to me a revelation of how beautifully and orderly the thing could be done. The great pile of clean dry clothing was emptied upon the clean, bare dining table; a big bowl of clean water set beside them. Then the sheets were piled by themselves, the pillow slips beside them, and the towels. One by one the sheets were shaken out, sprinkled a quarter of a yard across the end with the wide hem, folded squarely, the corners meeting, right side out, and, when folded a foot or more square, placed in the bottom of the basket. Each sheet, as carefully freed from wrinkles, as carefully sprinkled and folded, was placed, one above the other, flat in the basket and pressed firmly down to retain the moisture.

Then the tablecloths were generously dampened and folded in like manner, the hems straightened, and packed smoothly on the sheets. They looked nice enough almost to be placed in the linen drawer. The towels were dampened, doubled crosswise, and smoothed down upon the tablecloths. The napkins were dampened and piled one above the other, doubled crosswise and lengthwise, and pressed down upon the table linen. Pillow cases followed suit, then handkerchiefs, and here I noticed that little lace edges were deftly pulled out smoothly before folding once.

Now came the baby's dresses, soft and fine, with lace or embroidered edges at throat and wrist. It took a little time to pick out the crumpled trimmings smooth and straight, but it was done cheerily, and the little gowns, smooth at the bottom and folded, were finally rolled, each by itself, and the half-dozen or more were rolled in a damp square of muslin.

The underwear, lightly sprinkled, and the prints and gingham were on top, and a generous ironing sheet, folded, tucked them all in.

"There," I said, "now I know how getting ready to iron is a fine art, and I mean to do mine that way as long as I live."

"Too much trouble," you say? Not a bit of it. Ironing is a tedious, slow process, and you have all these little points to observe, either when folding or when you wearily stand at the ironing board. Think how your iron cools while you delay; how much longer you have to keep up a fire in summer, and how cold your feet become standing so long in winter. But when there are few wrinkles folded in, your iron glides over the smooth surfaces and you make rapid work; your sheets and table linen are as smooth as satin, and your bars fill so rapidly you have little sense of fatigue. There is no item of housework that I delight in more than the ironing, if I may sprinkle and fold the clothes myself.

Another part of the preparation for the ironing about which I am particular is the amount and quality of starch in the clothes. These days most people starch clothes more lightly than they did a few years ago. We no longer take pride in the fact that ironed petticoats "are stiff enough to stand alone," as we once did. I use in children's clothes and shirt waists only the thinnest of starch, in table and bed linen none at all.

Of course, to do nice ironing one must have smooth irons. When I need to use an iron which has stood long enough to become rusty, I heat it, rub it well in coarse salt to remove the rust particles, and smooth it off by passing it several times over a bit of hard, white soap and rubbing on a piece of newspaper. I use up most of my bits of white soap in place of beeswax or tallow for smoothing the irons, for I have found nothing else which does the work so well.

A smooth, hot iron, clean, soft-starched, well-dampened clothes, and a fresh cover on the board are the best possible preparation for ironing day.

In warm weather I love to take a bowl of water to the outdoor clothesline and dampen the sheet ends before taking them down, and then fold and place in the basket at once, and so give them no chance to get wrinkled. There is often a coolness after the sun goes down which dampens beautifully, and it is a time when you do not care to sew or read or write, but an ideal time to make glad and grateful whoever does the ironing.

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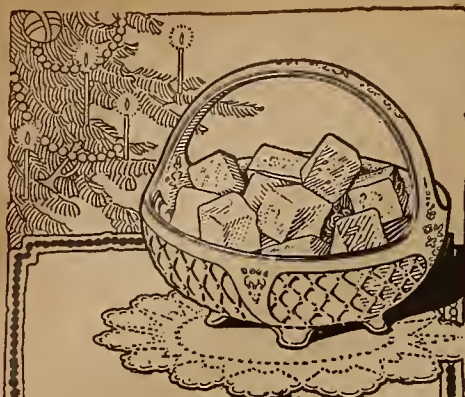
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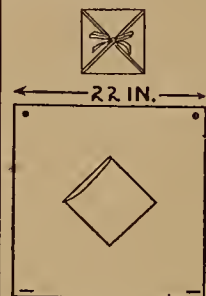
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The Housewife's Club

Secret of Good Fruit

A HOUSEWIFE who "never loses a can of fruit" tells us the secret. She never uses either the rubber seal or the metallic cap of a can a second time. The new caps cost 20 cents a dozen. They are often imperfect after being once used. It doesn't pay to risk fruit, sugar, and labor for less than two cents a can.

If a can should leak a little air when sealed with one rubber, take off the cap and put on a second one, and seal with two. This will usually make the seal perfect.



Napkin Holder—One of the most acceptable Christmas gifts last year was a case for holding napkins when not in use, thus preventing the soil they must necessarily get as we handle the contents of the linen drawer.

Take a 22-inch square of any desirable material (blue linen is very good) and finish the edge with finishing braid or a narrow hem. Then take another square, seven inches after it is finished, with one of its sides hemmed and the other three turned in and stitched to the large square after the centers of the squares have been placed together, the small one diagonally upon the larger. Slip into the pocket a seven-inch square white cardboard. Fasten two opposite corners with a button and buttonhole, and the other two with white wash ribbon.

The napkins placed on the small square, supported by the cardboard, will be protected when the corners of the large square are folded over and fastened. Mrs. A. C. H., Massachusetts.

Dainty Fruit Pudding—Make a batter of one-half cupful of melted butter, one-half cupful of milk, one teaspoonful of sugar, and a pinch of salt, with flour enough to make a cake batter. Three teaspoonfuls of baking powder should be stirred in with the flour. This batter may be poured over any canned fruit, such as peaches, pears, cherries, quinces, or apples, and baked forty-five minutes in a rather slow oven. R. L. F., Ohio.

Carrots in Lemon Cream Sauce—Cut boiled carrots into dice to make three cupfuls. Make a sauce of three tablespoonfuls of melted butter, add three tablespoonfuls of flour, mix and stir well, then add a cupful of stock, preferably chicken, and half a cupful of milk. When cooked put in the carrots, and season with salt and pepper and a little lemon juice. When thoroughly hot add the slightly beaten yolks of two eggs, and serve at once. A. W. O., New York.

Salad made of thinly sliced boiled carrots on lettuce, with French dressing, is very good; more elaborate is a salad of cauliflower boiled and separated into florets, mixed with boiled carrots cut into very small dice, then laid on lettuce-leaves and served with mayonnaise.

Ginger Snaps are always popular, and very difficult to keep when there are children in the house. To make them, boil one pint of molasses. While this is boiling, beat one egg, mix with it a tablespoonful of ginger, a scant tablespoonful of soda, and half a tablespoonful of lard. Pour over this the boiling molasses, mix stiff with flour, and let it cool—it may wait overnight if you like. Roll very thin, and bake in a pretty hot oven.

Cream of Celery Soup—Three heads of celery, cook in salted water until soft enough to rub through a colander; to a pint of celery pulp use one quart of rich milk and a pint of thin cream, drop a

slice of onion into the soup and bring to the boiling point. Rub together a tablespoonful of flour and one of butter, add enough of the hot soup to thin it and stir into the soup. Let it cook a few minutes, then remove the onion and it is ready to serve.

To Keep Hams and Bacon—To keep hams and bacon in perfect condition after curing, pack in barrels or boxes in clean oats. Keep closely covered and there will be no danger of trouble from mice or flies. Meat kept in this way will be found to be much superior to that wrapped and hung up. After the meat is used the oats can be fed to the stock.

White Cake—One cupful of sugar, two ounces of lard or similar product, one-half pound of flour, two teaspoonfuls of baking powder, whites of four eggs, nine tablespoonfuls of milk. Cream the lard and sugar together, add the milk. Then add the flour and baking powder sifted together, lastly the whites of the eggs beaten very stiff and folded, not stirred, in. Bake in a square tin for half an hour or until done.

O. W. A., Pennsylvania.

Keep pumpkins and squash in a dry, warm place through the winter, and you will have them to use as late as May. They may be kept in the kitchen cupboard or in a warm place in the chamber, but never put them in the cellar unless it is warm and dry.

GRACE P., Michigan.

Housewife's Letter Box

To Keep Beans Free from Bugs

Can anyone tell me what to do to keep bugs and worms out of shelled beans and peas? Mrs. F. W. R., Virginia.

THE weevil can be kept out of or killed in your beans and peas by placing them in bags or containers and heating to 130 degrees Fahrenheit, and keeping them at this temperature for four hours. This will kill the weevils that are in the peas or beans and also prevent the eggs of the insects from hatching. Then if the beans and peas are placed in containers which will prevent any insects from gaining admission, you will have no further trouble from the weevil.

Home-Made Wool Comforters

We have some wool from our own sheep cleaned and carded, for comforters, but the wool works through every kind of cloth cover I have tried. I first made a covering of cheesecloth, and then used a silkolene or sateen outside cover, but the wool still works through. Can you suggest a cure? Mrs. O. M. R., Oregon.

YOUR problem of keeping the wool in comforters from working through appears to be a new one, for the comforters made in the factories where sheets of wool are used for the filler have not given trouble in the way you mention so far as I know.

The use of a heavier inner cover, such as drilling instead of the cheesecloth, might have the desired effect, but it would make a clumsier comforter. Mating the wool very thoroughly together and pressing it down with weights before covering the wool would probably help.

Quilting the coverlet in two-inch squares when the cheesecloth cover is on should surely have the desired effect.

EDITOR'S NOTE—Have any of our readers had similar experiences with wool comforters; and if so, what did you do to prevent the wool from working through the covering?

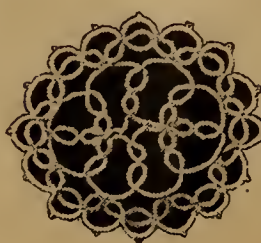
Bits of Christmas Tatting

A medallion in the corner of a gift handkerchief gives the personal touch



These three designs—the two medallions and the insertion—will be sent to readers who ask for them, and who enclose four cents in stamps. Write to the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio.

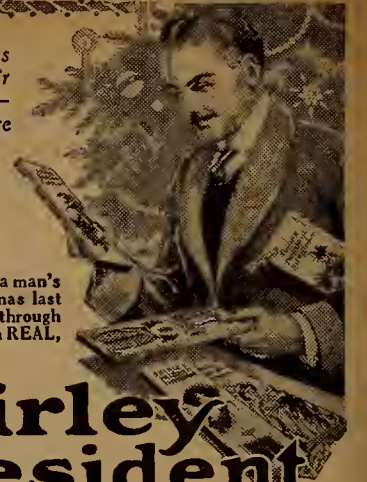
—or a set of them will please the girl who makes pretty blouses



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Sent Free for a club of Four yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year for 85c.



No. 772

This is a real steam engine for the boy and will be a source of entertainment and instruction to him. This engine contains the fundamental principles involved in a large size engine. It is simple and harmless in operation. To the youngster of mechanical turn of mind, this Weeden engine will be the grandest present that he could receive. It is without doubt the best toy engine on the market. It has all the parts of a regular steam engine, a fly-wheel, cylinder, boiler, piston, whistle, etc. Every engine is tested before it leaves the factory. Sent Postpaid.

Wildwood Sugar Shell

Sent Free for a club of Two yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year for 60c.



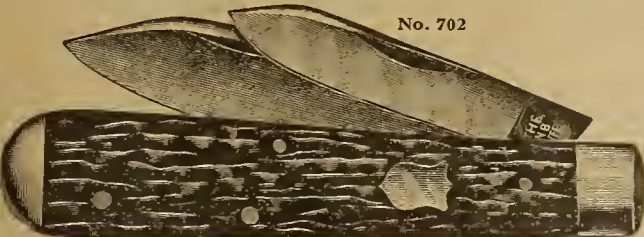
No. 706A

This sugar shell is made by the celebrated Oneida Community Co., whose wares are known all over the world for beauty of design and wearing qualities. The sugar shell we offer you here is the famous *Reliance Plate* and as the illustration shows is in the beautiful Wildwood design. We can not praise this premium too highly to our friends. It is something every woman will be proud of. Wouldn't this beautiful sugar shell make a dandy gift for that friend you have in mind. And you can have it without one cent of actual cost. One subscription from a neighbor in addition to your own renewal will bring the spoon. Sent Postpaid.

Double-Bladed Jack Knife

Sent Free for a club of Two yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal for one year for 60c.

Good
Size
and
Shape



No. 702

Blades of
Best
Steel

Here is a good-looking substantial jack knife. It is considerably larger than illustration. Has two finely tempered steel blades 3 inches and 2½ inches long. It has a brass-lined stag handle, with polished steel cap and bolster. A knife that will stand up under a lot of hard usage and give its owner heaps of satisfaction.

An Extra Gift Absolutely Free

If your order reaches us before Dec. 22d

If you send your order so that it reaches us on or before December 22, 1915, and attach to it the coupon appearing at the bottom of this page—we will send you **Absolutely Free**—a set of *Ten Beautiful Christmas Post Cards*. These cards are lithographed in many colors and are just the thing to send as remembrance gifts to friends for whom you can not afford to buy anything expensive.

Remember, these cards will be sent Free in addition to any other premium you select, if you use the coupon as directed and have your club or renewal order reach us on or before December 22d.

Guaranteed Hollow-Ground Razor

Sent Free for a club of Three yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal for one year for 70c.



No. 953

We send you this razor with a positive guarantee. We want to please you.

Please do not confuse this razor with any of the cheap articles you may have received as premiums with subscriptions. This is a genuine hollow-ground razor—high grade in every respect—made of best grade razor steel. Full size 5/8 inch blade, ground and set ready for use. Use this razor and if you are not satisfied, return it within 90 days and we will replace it. Sent Postpaid.

School or Office Writing Set

Sent Free for a club of Three yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal for one year for 65c.



No. 771

This is a most desirable outfit, all packed in a neat artistic box. Assortment consists of one fine pen-holder, beautifully colored and fitted with standard steel pen, one combination pencil with red lead and blue lead, one rubber eraser, of exceptional quality, one combination pen, pencil and eraser, one dozen assorted steel pens of standard make, in nickel-plated tube with cap, and one pencil-sharpener. The attractive box in which these articles are put up adds materially to the effectiveness of the outfit. Sent Postpaid.

14-k. Gold-Nibbed Fountain Pen

Sent Free for a club of Three yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year for 70c.



No. 767

This is a high quality pen with patent feed and 14-karat gold nib. Please bear in mind that a fountain pen is worthless for writing purposes unless the nib is of good quality. You can't buy pens with gold nibs for 19 cents. This pen is of the popular dropper filler style. Sent boxed with directions. Prepaid.

Unbreakable Doll

Sent Free for a club of Four yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year for 85c.



No. 954

Here is a dolly that will gladden the heart of any little girl. It has movable arms and legs, stuffed body, and unbreakable composition head. You can see from the picture that she is all dressed up in her Sunday "go-to-meetings." She even has her bonnet on, all ready to start for your house as soon as you send for her. Better hurry the invitation. Sent Postpaid.

Slip-Over Fudge Apron

Sent Free for a club of Two yearly subscriptions to *Farm and Fireside* at 35c each, or, with your own renewal alone for one year for 60c.

Every woman and girl knows how handy it is to have one of these slip-on aprons at hand. It can be put on over the dress and affords perfect protection. The apron we offer is three-quarter length, stamped on National white linen—all ready to be embroidered. Goes on over head and shoulders. The belt passes around waist, fastens in front. This is a premium with a particular appeal to the younger feminine members of the family. Fudge aprons are all the go these days and of course the girls all want them. Any girl reader of *Farm and Fireside* can earn this apron in a very short time. Two yearly subscriptions at 35c each will bring it without one cent of actual cost. Get "Dad" to give you his renewal to-day, then another from a neighbor and the thing is done, send the names and the 70c collected and *Farm and Fireside* will be sent for one year longer to each of your subscribers and the apron will be sent to you. We have sent hundreds of presents to young people with the right kind of "hustle" in their make-ups. Why not to you? Apron Sent Postpaid.



No. 955

CLIP THE COUPON

Ten Beautiful Christmas Post Cards

As a reward for promptness

12-4

We will send you the set of cards Free in addition to any other offer made on this page, if you send your club or renewal order in time to reach us not later than December 22d and accompany it with this coupon. These cards are certainly worth having. Fill out lines below and send with your order now.

FARM AND FIRESIDE, Springfield, Ohio.

Please find herewith my remittance and order for *Farm and Fireside*. You may send the Christmas cards to

NAME

P. O. STATE

STREET OR R. F. D.

THIS COUPON VOID AFTER DECEMBER 22, 1915

CLIP THE COUPON

USE THE COUPON
The Set of Ten Free Post Cards
will not be sent without it.

COLGATE'S for Christmas

*Useful Gifts
-Not Gimcracks*



THE true spirit of all Christmas giving is to make gifts which show thoughtfulness and purpose.

For man, woman and child you can find Colgate Comforts which make charming, acceptable and useful gifts—conveying more lasting pleasure than useless “gimcracks.”

However little you pay you are purchasing quality—the name “Colgate” on toilet articles corresponds to “Sterling” on silver.

Join the Society for Promotion of Useful Giving—be a “SPUG” and select from the Colgate assortment at your dealer's.

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FARM *and* FIRESIDE

The National Farm Paper - Every Other Week

ESTABLISHED 1877

5 cents a copy

Saturday, December 18, 1915



PHOTOGRAPH BY JOHN KABEL

"'Twas the night before Christmas"

The Next Issue News

Farm and Fireside Editor's Office

Volume 1

Number 2

Where a Farmer Gets \$3 for Use of \$1

Every dollar spent for commercial fertilizer on the John A. Cavanagh farms, his records show, returned the original investment, and three other dollars in addition. This doesn't mean that all a person has to do is to buy \$500 or \$1,000 worth of fertilizer and in the fall reap \$1,500 to \$3,000 in profits. He nearly doubled his oats yield, and increased the corn crop. All of the Cavanagh acres are rented. The grain rentals have been increased from less than \$2 to more than \$10 an acre. Harry M. Ziegler tells Mr. Cavanagh's experience with fertilizers in an article which will appear in the January 1st issue. It is the next



Ponies learn rapidly

How to Teach a Colt to do Tricks

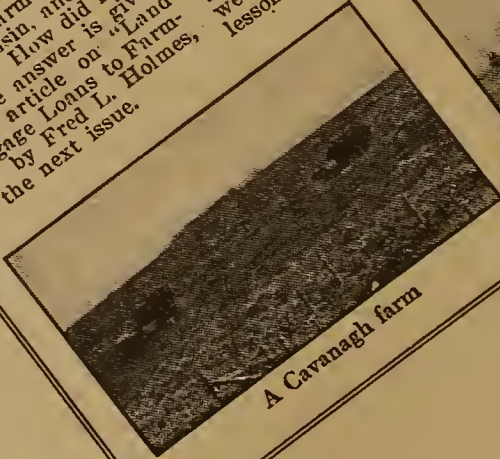
It is a lot of fun to teach a pony or a colt to say yes and no,—by nodding its head up and down or from side to side,—to stand with fore feet on a box. David Buford explains how to do all of these tricks, in an article in the next issue.

Do You Want to Own a Farm?

When Michael Gorky was forty-five years old, he had a wife, nine children, and \$400. It took him eighteen years, working as a railroad section hand on a big railroad running out of Chicago, to save \$400. That was five years ago. He still is blessed with a wife and nine children; but now he owns a farm in northern Wisconsin, and is his own boss. How did he do it? The answer is given in an article on "Land Mortgage Loans to Farmers," by Fred L. Holmes, in the next issue.

Show Real Buffaloes Grazing

If you have never seen a herd of real buffaloes grazing on real grass, you'll be interested in the picture page in the next issue. This buffalo picture isn't a painting or a drawing; it's a real photograph. It is a picture of a vanishing race that didn't quite do it. Then there is a picture of Tabby, a cat, that shows how we humans can learn a lesson in preparedness.



A Cavanagh farm

Have Another Good Looking Cover

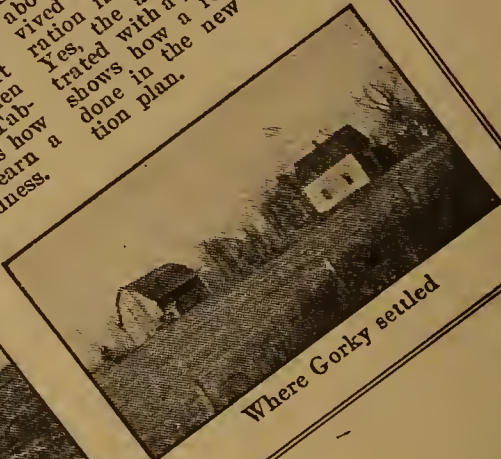
In this motor-car age we appreciate good horse flesh all the more. This is why all lovers of horses will admire the very fine picture that appears on the cover of the January 1st issue.

Tells What Causes Boils

"Every boil you have is worth \$5," was quite a common saying ten or fifteen years ago. Why the price wasn't \$3 or \$17 instead of \$5 no one knows. But we do know what causes boils and Dr. David E. Spahr has an article about boils in the next issue.

To Make Your Home More Attractive

You can make your home infinitely more homelike and attractive with this style of house decoration that was popular away back in Colonial times. And American homes are giving this revival style a hearty welcome. The designs are delightful, and are an unusual advantage. The designs are cheap, and tell you how to make your home more attractive. Yes, the article is illustrated with a picture that shows how a room looks done in the new decoration plan.



Where Gorky settled

FARM and FIRESIDE

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Published Bi-Weekly



A Christmas Sermon



Children Have True Faith; Have the Oldsters Lost It?

By HERBERT QUICK

VERILY I say unto you, Except ye be converted and become as little children, ye shall not enter into the kingdom of heaven."—Matt. 18:3. This, beloved, is the text I have taken for a little Christmas preachment for this December, 1915.

The children have a little kingdom of heaven of their own at the Christmas season. They have a faith of their own, in which they believe against the evidences of their senses. The stovepipe hole to this sublime faith presents no obstacles to the passage of Santa Claus and his pack, and the narrow roof expands to the child's fancy into an ample landing place for all that train of reindeer and the sled laden with happiness. Even the coarse and sordid suggestion of the older boys and girls that there is no Santa Claus, the certainty that the chance-seen present in the drawer and the bit of work in Mama's hands last week has reappeared in the wonderful output of Kriss Kringle's workshop, does not disturb this faith. Still the child believes. The child feels truly that, whatever may be the literal fact, the myth of Santa Claus is deeply true, and the Christmas idyl is based on the eternal verities.

This is true faith—the evidence of things not seen, the substance of things hoped for.

Have we oldsters lost the sense of Christmas? Have we become Old Scrooges to whom the whole thing is obnoxious? Have we let the sordid things of life, the hard work, the chapped hands, the mud, the cold, the wet, the struggle with life, the contests with weather and diseases and insects and bacteria and fungi mar the fair things of our souls and corrupt our simple faith in the kindnesses, the love, and the faith which are the solid basis of the Christmas observance?

Then we need to be converted and become as little children. We need to cease to be Old Scrooges and become Tiny Tims. Unless we do this we cannot enter into the kingdom of the Christmas heaven.

There are people whose souls have gradually congealed into a sort of spiritual ice. There is in them a sort of resentment and irritation at the little loving amenities. Are we not, most of us, to a greater or less extent, in this state of spiritual congelation? Have we not lost some of the gift of showing forth happiness and giving forth tenderness?

I am sure we have. We cannot slip our hand into the hand of a friend and press it as a child can and does do. "Heaven lies about us in our infancy." We come into the world "trailing clouds of glory," but later!

"The rainbow comes and goes,
And lovely is the rose;
The moon doth with delight
Look round her when the heavens are bare;
Waters on a starry night
Are beautiful and fair;
The sunshine is a glorious birth;
But yet I know, where e'er I go,
That there hath passed away a glory from the earth."

We do get harder with the attrition of living. The ice will form over the spirit. But let us be glad that even ice possesses latent heat, and that there is such a thing as a spiritual thaw, a break-up of the soul's arrested flow.

That is what Christmas is for. Let us try to be converted and become as little children, so that we may enter with the children into this kingdom of heaven. It will do us good. We shall be far happier if we

can generate in ourselves an all-the-year-round Christmas faith—becoming as little children. The ice will not be quite so thick afterwards—and that will be a blessed thing. In other words, we have lost the gift of hanging up our stockings and counting confidently on Santa Claus' filling them. This does not mean we should abandon our struggles for social and economic justice. Far from that!

I like to think to-day of the old-fashioned Christmas on the farm: a good, cheerful fire for Christmas Eve reviving the tradition of the Yule log—a real Yule log if the house is blessed with an open fireplace; games and high jinks, with some of the neighbors in; a family ride to the Christmas services in church; stockings hung up; the fodder all in; the

stock warmly housed and bedded down; the vibrant silence and sparkle of the night before Christmas; the early morning raids on the hung-up stockings, on the family Christmas tree; the hearty "Merry Christmas!" in which passes away every secret spite or silly family grudge; the holly and mistletoe or, failing these, the sprigs of hemlock, cedar or pine, and the dogwood, bittersweet, and barberry berries; the corn-poppings and nut-crackings; the candy-pullings; the steaming kitchen ejecting Christmas dainties and substantial; the laden table; the full family circle, with perhaps some vacant place newly filled

through the forgetting of a misunderstanding or the forgiveness of some fault; and finally the night of Christmas!

And perhaps a blizzard outside!

"What matter how the night behaved?
What matter how the north wind raved?
Blow high, blow low, not all its snow
Could quench our hearth-fire's ruddy glow."

So writes Whittier of weather fit for Christmas cheer; and look at Emerson's picture of the same thing:

"The sled and traveler stopped, the courier's feet
Delayed, all friends shut out, the housemates sit
Around the radiant fireplace, enclosed
In a tumultuous privacy of storm."

Such a Christmas I wish to every American farm to-day—not necessarily the snow, of course, for some live among the palmettoes and will pluck crape myrtle to mingle with the mistletoe; but such a Christmas in spirit—the world shut out, all well within.

It is the best way to have a merry Christmas this December, 1915. We have much to be thankful for, but our blessings come this year so linked with calamity for our sister peoples that I do not know how to be glad about them. The man who knows how properly to give thanks this year is wiser than I. Perhaps the best attitude is that of sorrow and apology that we as a nation are prosperous so largely by reason of the wild waste of blood and tears which overspreads the world. I am afraid to give God thanks for what must bring sorrow to the very throne of the Infinite.

If the rest of Christendom be engaged in holding a Yule-tide orgy with all its human sacrifices multiplied a thousand times, and good will crowded out by hatred, are not these good reasons why we should advance the banners of Christmas?

Therefore, peace on earth, good will to all men.
A Merry Christmas and a Happy New Year!



System Finds Farm Leaks

When Poor Health Drives a Man From the City to the Land

By MORRIS H. CROCKETT

FAILING health drove me out of business life, where I had attained a position of some importance, largely through the rigid application of systematic methods.

When I answered the "back-to-the-land" call I seemed to have closed a door on the old life of system. Perhaps this was due to a sort of reaction, or perhaps to the sharp contrast forced upon me by the sudden and radical change of occupation and surroundings. However, I entered the new life innocent of system on a farm.

I bought a five-acre fruit and poultry farm in a section of California that is just now in a period of readjustment. The large ranches of the old days are being subdivided into small holdings, which are being purchased mostly by Easterners and persons from the various coast cities, who, like myself, have been driven to the farm by ill health or some other reason. Most of them had barely enough to make a first payment on the place and carry them along to the first harvest.

I came to the farm with an idea—a sort of a subconscious one—that all a farmer had to do was to plow, plant, and reap, and Nature did the rest.

The place I bought was badly run down, and I got it comparatively cheap. I assumed a mortgage of \$1,000 at seven per cent interest, paying the balance in cash. This left me a bank balance of \$1,100. One horse, 1,000 chickens, and the farming implements went with the place.

The first year I made a few improvements in the house, fixed some of the fences, and bought some fancy poultry. I had always had an idea that I should like to raise fancy chickens.

We went on the place in the spring. During the summer there was a considerable income from the chickens, but there was also quite an outlay for feed, all of which had to be bought. The money we took in we added to the bank account, keeping no check on the source from which it came. All bills were paid by check.

The place was set mainly to late and early apples, interset with loganberries. When the berries were ready to pick we hired pickers, most of whom were inexperienced, and began the harvest. I had joined a co-operative association formed to handle the berries, and through this organization I sold the berries. Through the inexperience and carelessness of the pickers and my own ignorance and lack of system, most of the berries were graded as canner stock and paid for accordingly.

When the early apples came on they were picked and marketed through another co-operative organization I had joined. Then came the late apples, which were handled in the same manner. The income from these various sources was handled in the same way as that from the eggs. I had taken in a good deal of money and felt highly encouraged. The farming game was going to be easier than I thought.

Then came the reckoning. The help was paid; feed bills, grocery bills, and incidental expenses were paid. A general checking showed my bank account was smaller than it had been in the spring.

This gave me pause until I remembered that the price of apples had been lower than usual, the price of chicken feed had been high, and that I had made several permanent improvements on the place.

During the winter the income from the hens decreased and the price of feed increased, and by spring my bank account was smaller than in the fall.

The second year was a repetition of the first, with the exception that, in an attempt to guard against the deficit shown the year before, I enlarged my operations by planting some rhubarb. This required more help. The rhubarb brought in much money, as the price was good. The other crops were handled as in the previous year. Although the prices of all the products I sold had been good, my bank account decreased. I didn't have any permanent improvements credited to the farm the second year.

Loses Money for Three Years

THEN followed the third year. It was much like the two preceding years, except that I again branched out with the idea of filling up that ever-widening hole. This time I put out some strawberries. Yet there was a deficit at the end of the season, even larger than the year before, and my bank account was alarmingly small.

In my case the third year was the charm. When I was done paying bills and knew where I stood, I went for a walk, and did some good, hard thinking, the first I had really done since I left the office in the city. It was somewhat along the lines I used to think when the bookkeeper's monthly statement, when I worked in the city, showed that we were not quite up to the standard in net gain. I went back over all my operations for the three years, analyzing and classifying as an efficiency engineer would have done. As a business man regarding the operations of a farmer, I made some startling findings. I had no figures to prove that I was correct in my deductions, but reason was on my side.

I mapped out a system, bought some index cards and cabinets and some blank books, one for a cash book and one for a journal. Then I went to work.

The fourth year I raised all of the crops I had the third year, but I kept books on every one, charging

against it everything it should bear, and giving it proper credit for its earnings. That year I broke even. I had the mortgage extended. When autumn came I knew just what crops had paid and which had not, and my books proved that my deductions made that day in the orchard had been correct. I had too many irons in the fire.

Keeping Books Solves Problem

THE result of that first year's bookkeeping was that I entered the fifth year with fewer irons in the fire. The fancy chickens were gone, the rhubarb had been plowed out, as had the strawberries. A thorough system of fertility was begun. More modern equipment was installed in my poultry plant. Early apples were grafted onto the late apple trees whenever possible; when not possible, the late apple was dug out and an early one planted in its place. The loganberries were left in the early orchard for that year.

At the end of the year my system showed a substantial profit, but not enough to suit me. I had found that to make a success I must specialize on early apples and chickens. I bent every energy to developing these two industries to the highest production possible, on a small place.

Farming is a business just as much as manufacturing is a business. Farming is a manufacturing business. The products of a farm are live stock, and grain, and poultry and eggs, and butter, and milk and cream, and many other things. For this reason business methods are needed on the farm to make a success of the efforts. My own experience has taught me that every farmer should keep a set of books, and keep them in such a way that he will have an accurate check on his farming operations. This is the only way he will know how much money he is making.



When in operation the canning outfit is placed on the kitchen stove. A part of the meat and vegetables and fruits the girls canned is shown on the table

How to Can Meat

What a Steam-Process Outfit Does

By GRACE DIETZ

THAT it is practical to can meat with the steam-process canning outfits, and that it is possible to cut the cost of the summer meat supply nearly in two, is shown by the experience of two Nebraska girls. My sister and I are the girls, and we canned 22 hogs, and 21 quarters of beef in 17 homes in one month last winter.

It is a feast or a famine in the matter of the meat supply in many farm homes. In the winter there is plenty of fresh meat. This is because meat keeps fresh during cold weather. With the coming of warm weather there is a longing for the fresh-meat supply of winter. This unbalanced condition of the farm meat supply need not exist now.

Anyone, by a comparatively small investment in a canning outfit employing steam under pressure as the sterilizing agent, can safely and easily convert fresh meat in the fall and winter into a savory, appetizing supply for summer use which will always be ready for instant serving.

The meat we canned last winter included between 1,800 and 2,000 quarts of pork, beef, and fish. Part of this work was done for farmers who were without canning outfits, and the remainder for people living in town.

These town people informed us that the pork we were canning cost them \$6.50 a hundredweight, live weight, purchased from farmers. At that time the best cuts of pork were selling on the block at 30 cents a pound.

For one family we canned three quarters of beef. Another for which we canned two hogs told us that the expense incurred was no greater than their lard bill generally amounted to, and that their meat for the following summer really would cost them nothing.

Some of the girls and women who own canning outfits are realizing a nice addition to their pin-money by canning meat for their neighbors.

Besides our custom canning we have canned fish and chicken for ourselves.

The flavor of a steam-pressure-cooked canned chicken is delicious beyond description. Even a two-year-old

chicken, after treating with a fifty-minute canning process at 260° F., will come out of the glass jars fit for a king's banquet.

Some of our friends prefer to can up the surplus hens after the laying season is over, instead of selling them for what they will bring.

The report of the National Home Canners' Club shows that the members canned 121,500 quarts of surplus products last year.

My sister and I made an exhibit of home-canned meat this year at the Forty-seventh Annual Nebraska State Fair. Our exhibit consisted of pork, salmon, chicken, sweet potatoes, and cabbage.

As an indication of the favor in which our exhibit was received, we were asked to represent Nebraska with our canned goods in the Colorado Interstate Fair and Exposition at Denver, which we did.

Just a word on the merits of canned fish. The war in Europe has again shown the sustaining and nourishing qualities of canned fish. Immense quantities of fish are being used by the soldiers because of its keeping qualities and its ease of transportation.

Any American household can now put up its own supply of fish just as easily as it has heretofore canned its supply of fruit.

All the meat and fish we canned last winter kept perfectly. Had we not known definitely that it would keep, we should not have dared to undertake the job, for the meats we worked up, reckoned at farm prices, were worth over \$700 in cash.

My canning retort measures 12x18 inches, and holds 14 one-quart jars, or 22 pint jars, or 5 half-gallon jars and 11 pints. It is made of 12-gauge boiler plate and has a semi-cast cover fitted with steam gasket. My retort is also fitted with a steam gauge and safety valve.

After processing, the temperature of the canned goods is allowed to go down to normal. The lid is then taken off the retort and the jars' caps receive the second and final tightening, which completes the seal. The caps are partly tightened while the cans are in the retort. Full directions are furnished with a canning outfit.

EDITORIAL NOTE—Miss Dietz has furnished FARM AND FIRESIDE with her recipes for canning by the steam-pressure method sausage, roast beef, chopped beef, roast pork, chopped pork, and browned pork ribs. These recipes will be sent to subscribers on request.

Do It Yourself

By C. F. FISHER

WITHOUT our realizing it, a new slogan has been coming into use. That slogan is, "You can do it yourself."

And the thing I like most about it is the ring of sincerity. It is not flattery; those who say it mean it.

You may be surprised at this, but the new slogan is used mostly in farm literature. You seldom find it addressed to city folks.

Thus in spite of the common slur on the "jack of all trades," farmers have in some occult manner given the impression—and it is a correct one—that they are resourceful.

The gasoline-engine maker never for a moment questions the ability of a farmer to run his engine as it should be run.

The cement industry freely advises the farmer to do his own cement work.

The makers of heating, lighting, and plumbing supplies tell the farmer to install them himself.

Lumber dealers talk to farmers frankly about grades of lumber and methods of using it, because they know he is going to do his own carpenter work.

Some of the tractor companies now dispense with personal demonstrations because they know the farmer who has made enough money to buy a tractor is smart enough to run it.

The same thing applies to fencing, painting, roofing, and all kinds of construction and repair work.

A professor of chemistry in a state university astonished his associates by installing in his home a complete steam-heating system. He had been a farm boy.

A friend of mine who recently moved from the city to a farming community near-by had built a house. In this house he installed an up-to-date water system by his own labor. He also did much of the painting both inside and outside. And then, to cap the climax, he installed a furnace. He was farm-trained.

On an Indiana farm with which I am familiar a complete gas-engine power outfit was installed by the labor of two boys. This outfit ran the sewing machine, the churn, the separator, the lathe, the grindstone, and some other things I have forgotten. These boys and many others just like them got their ideas from the farm and its association with the notion of "doing it yourself."

Use Tools and Save Money

WHAT about it all? Simply this: the use of tools is a desirable asset both from the standpoint of saving money and as an education. FARM AND FIRESIDE has encouraged the use of tools by a department of handy devices that has been maintained for years.

Practically every issue contains some building plans that are reasonably simple and require only those carpenter tools found in the ordinary tool chest. Perhaps you have a building plan which you consider especially good. By all means send it to the editors with description and an accurate drawing.

If your hands are a bit clumsy, let the boys or the girls draw it. It will do them good. Think more about farm architecture which includes not only the appearance but the convenience of buildings.

Last of all, let's not disappoint all the fellows who say, "You can do it yourself."

We can.

Happiness, Incorporated

How a Money-Making Minnesota Stock Farm is Managed

By ALBERT E. RICHTER

AT THE time of the incorporation the Lismore Stock Farm was paying good profits, though there was a debt against the land purchased. At an early meeting of the board of directors the question of salaries and dividends was brought up. It was decided that inasmuch as the president and former owner of the farm had liquidated this debt annually, it was up to the new managers and directorate to continue this liquidation, and, if possible, in larger annual payments. By computation they found that at the present rate of liquidation the annual payment on this debt was equal to a ten per cent net dividend on the capital. Each year, by successful management, this percentage has grown larger, and next year the debt will be completely wiped out, the farm will be clear of any indebtedness, and both salaries and dividends will be paid. "If for no other reason," says John McCallum, "than to reduce our income tax."

This postponement of dividends has not deprived the younger McCallums of money to spend; but it has, with other responsibilities, taught them the value of money. On a desk in the office-library the check book of the corporation lies always open, and every member of the family, boy or girl, as a stockholder, is at liberty to write and sign checks on the general farm account without asking permission of anyone. The signature of Miss May, the youngest daughter, is just as good at the bank, when signed to a company check, as that of the president of the corporation.

John McCallum's idea in this was that it placed his co-partners on their honor and would develop a high sense of business integrity. It has. "They have passed their old 'dad' up only once in money matters, these directors of mine," said President McCallum, "and that was when we had a surplus which we all felt should be spent upon the farm. I was in favor of a new silo; but, blame me, if the entire directorate didn't spring a surprise on me and voted unanimously over me and my silo, and bought an automobile. There she is, out in the garage," he chuckled.

The accounting system of the cost of operations on the Lismore Stock Farm is an interesting and an important item. This work is done by Gilbert, the general manager. To begin with, a labor charge account is accurately kept on all work animals. Horses are credited so much a day for their work, and are charged for feed, pasture, and upkeep the year around. A charge is made against each tillable acre for the labor of plowing, seeding, cultivating, and cost of seed. Soil depletion is figured on a percentage basis per acre. Every acre is credited with its gross production at the prevailing market price and its increase in value. Each manager is credited with a labor account, the same as though he were on a salary basis. The amount of outside hired hands required varies with the pressure of work during different seasons, and is charged on the labor account. Machinery and equipment is charged with depreciation, and with repairs made each year. Buildings and improvements are assessed at a certain valuation, varying each year with the amount of repair work done and if a relative decrease has taken place. Mr. McCallum is required to make a complete statement of the business to the Federal Government every year, for the adjustment of the income tax, so it is particularly necessary that he know exactly how the business stands. Gilbert does not claim that his accounts are complete, but says that he is doing all that he can to keep down overhead charges, and to make everything on the farm bear a relative portion of the operating expense. And he is not an expert accountant.

Market Crops on Four Legs

ALL the grain grown on the farm, except wheat, is fed to the stock, and marketed on four legs instead of four wheels. This year the farm was cropped with 640 acres in grass and pasture, 300 acres are seeded down to clover and timothy, 260 acres are in corn, 440 acres in wheat, 80 acres in barley, and 160 acres in oats. Last year wheat averaged 18 bushels to the acre; barley, 35 bushels; oats, 45 bushels; while 60 acres of corn husked 60 bushels to the acre. The balance of the corn is all fed in the bundle, not husked. A definite system of rotation is followed on the farm. Each year the aim is to seed down and fence one quarter section to clover. Clover and timothy are cut for hay the first year and pastured the second, when it is also manured. Then, if a catch is obtained on another piece, the pasture is broken up and cultivated to corn. Small grains follow the corn, and then back comes the clover and pasture, with its rich fertilizer. The manure from the hog pens, cattle sheds, horse barns, and sheep shelters plays a big part in this series of rotations, and each year it is helping to check the depletion of the soil. Production per acre on this farm is showing a steady increase. The subject of crop rotation forms many an important and interest-

ing round-table discussion of the board of directors.

The farm carries over 250 head of cattle, of which 75 head are pure-bred registered Shorthorns, and none of them are less than three quarters full-blood, as pure-bred sires have been used on the farm for the past twenty years. From 500 to 700 hogs are produced annually, all registered Duroc-Jerseys, or eligible to registry. Last year 26 pure-bred boars were sold at an average price of \$35 apiece. The week before the writer visited the farm two carloads of hogs were shipped to the South St. Paul market and brought the top prices. There are about 300 head of sheep, Oxford Downs, about seven eighths pure, on the farm. The wool from these sheep brought nearly \$500 at the last shearing.

"Our stock is not all pure-bred as yet," said Mr. McCallum. "but we have had nothing but pure-bred sires on the place for twenty years, and the boys are now greater enthusiasts for improvements than I am. Some years ago, however, the boys would come to me and complain about the live stock on the farm. They said that it kept them with a pitchfork in their hands from morning until night. One midwinter day, when the temperature was playing around ten below, I sold over \$4,000 worth of cattle and hogs right on the farm, and I heard one of the boys say, 'Gosh, but we sure would get cold feet hauling that much grain ten miles.'"

"At another time we had a piece of clover and timothy that was pastured two years and heavily manured—perhaps it got more than its share of manure, because it was near the barns. We plowed it up and planted corn, the next year we seeded it to wheat. After the wheat was harvested, one of the boys came to me with the news that it yielded 36 bushels to the acre. He was somewhat skeptical of live stock and wanted to show me what wheat would still do on our farm. I knew what was on his mind and told him to wait until they threshed a piece farther away that had received very little manure. It ran 17 bushels to the acre. We have had a good many practical lessons on the value of live-stock farming demonstrated to us on our own farm—lessons that the boys have taken to heart.

Make \$15,000

LAST spring we sold ten head of horses for \$1,825. When Gilbert was entering the sale on the books he turned to me and said: 'Father, how in the world did we live when we only had one crop a year to sell? Now scarcely a week goes by but we sell something.' Gilbert is right, and now my boys are live-stock farmers. From

March to June last year our receipts from the live stock alone ran between \$8,000 and \$9,000. We sold three carloads of cattle, one carload of hogs, the ten horses mentioned, and a lot of pure-bred sows to some of the neighbors. Every animal was bred and raised on the farm. Last year the farm returned a gross income of over \$15,000, of which over three fifths was received from the live stock sold."

And now let me tell you what this big, whole-hearted Scot thinks of his four girls and their value to the corporation, for they are stockholders.

"What service do your daughters perform in return for the shares of stock they were given, and for the dividends they will receive?" I asked.

"Why," answered John McCallum, "they are sunshine producers. If they never did a stroke of work around this house, they would be worth far more than they receive, merely by producing sunshine for the men-folks on this farm. Would that every farm in the country had four girls like mine. We would have better farmers. But too many farmers fail to realize that their daughters are actual producers—producers of happiness, love, and sunshine. That's what really counts."

And now let's hear the girls' side of the case. They have all been or are going to Carlton College. One of them was graduated this year, one took a normal course, and is teaching in the local rural school. I asked, "What do you think of the problem of keeping children on the farm?" The answer came as a chorus, in unison, "There's nothing to it, it's so easy."

"Of course," said they, "if people think that just because children happen to be born on a farm—which is no fault of their own—they are only good to work at chores, do the milking, work in the garden, kitchen, laundry, etc., with no time to play, or read, or have good times with other children, then they cannot be blamed for not liking the farm. We have always lived like city children—in fact, we can't see the difference.



The farm carries more than 250 head of cattle, of which 75 head are registered Shorthorns

Since we were old enough we have always had our dolls and playthings. We have our dolls yet, just for remembrance' sake. When we were old enough to read we had children's magazines. Now we have the current magazines, and we buy the best books of fiction. Our dearest friends are the young people in our neighborhood and, of course, those we have met at school. We have dances and parties and picnics. We have our work to do too—we always have had. But work in our house was never made a drudgery for us.

Girls Don't do Any Heavy Work

NOW we have a girl to help us in the kitchen. We have an automatic washing machine, running water in the house, plenty of ice in summer, and lots of fuel handy in winter. Our brothers never expect us to do the heavy work which so many farm women have to do, and we never go into the barns. We are not allowed to. City women in average homes are not expected to do all sorts of heavy work, and there is no reason why farm women should. Of course, if we could not afford to have help we wouldn't ask for it or want it. As Daddy says, 'if people would only use a wee drop o' common sense' these problems you read so much about would never exist. As far as good times go, we have better times at home on the farm than we do in the city at school."

How shall we keep the children on the farm? Perhaps the question is easier to answer now. Do it as John McCallum did. That does not mean that the farm must be incorporated; that was only the means to the end. John McCallum's principle is not complex: it is simple; so simple that every farmer can take it unto himself and use it to solve his problem, if he has one. What John McCallum did was to adopt a system of diversified farming that made farm life interesting, and then he gave his children a financial interest in its successful operation. That is all there is to it. Of course a great deal depends upon the character of the man. That is where the story of John McCallum's life illustrates an unusual lesson of usefulness—loyal soldier, brave pioneer, good farmer, kind, wise, and generous father, taking the place of a mother to his daughters and being a real "pal" to his sons, this sturdy Scot has fulfilled his contract with the Lord God of the Universe, and is hale and hearty and able to enjoy life to its fullest, to reap the benefits of the seed which he has sown in the natures of his children.

As I was nearly through with the interview, I was surprised to see a veteran Shetland pony stiffly make his way to the McCallum kitchen door, scrape his hoof on the porch floor and attempt to shove the door open with his nose. Parts of the pony's hide were covered so thickly with tangled hair as to invite the birds to build their nests therein. And parts were bare.

"What do you do with that old soldier?" I asked.

"Feed him bread and sugar," was the Scot's reply.

The kitchen door opened and May McCallum came out. She had her hands filled with bread, buttered and sugared, and the old fellow reached up his nose, sniffed, then took slice after another until they were all gone.

Thinking to have some fun with Mr. McCallum, I said: "Why don't you shoot him?—he must be thirty years old."

"Why don't I shoot one of my boys or one of my girls?" came back the reply. "My oldest boy was three years old when I brought that pony from town for him. Now he is thirty-seven. One after the other, as soon as the children were old enough to throw a leg over his back, they rode him all over the prairies. That pony always brought back all he took out."

"What's his name?"

"Beauty," softly replied the bewhiskered son of Scotland, whose retrospective view did not see the bare spots nor the birds' nests. "Beauty, there, is just one of several old pets, apparently no longer of any use, but he is a sentiment producer. That old beast

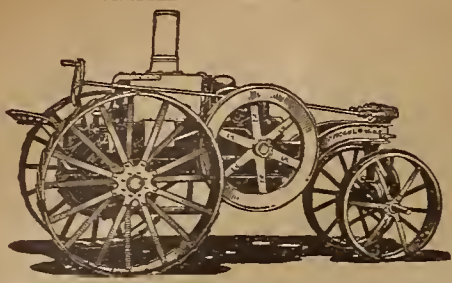
may look a sight to you, but he helps make the farm livable. I wonder if that is not just as important as to make the place livable."

John McCallum's kind is needed in American life. He has done his duty, and he is content. Next to his family, and above his farm—although he probably wouldn't admit it—there is just one thing that John McCallum is proudest of, and that is his military record. A light of reminiscence crept into his eyes when he said, "There is just one thing, when I am gone, that I have asked the boys to do, and that is to place upon my tombstone:

"He marched with Sherman from Atlanta to the Sea."



All the grain grown on the farm, except wheat, is fed to the stock, and marketed on four legs



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"My Narrowest Escape"

Other Letters from Readers

Trifled With Lunatic

By Mrs. H. B. Ellsworth

FATHER'S farm lay between high hills whose stony tops seemed to shut out all intercourse with the outside world. Small wonder that Sister Flora and I felt depressed that summer afternoon, for the rest of the family had gone to a meeting of the Grange, leaving us alone in that lonely valley.

After wandering aimlessly around the farm we climbed to the loft of an old log corner where Flo, laying aside the dignity of her sixteen years, proceeded to help me make a trousseau for my doll. We were deep in the complications of a Dolly Varden hat when, happening to glance down where the road entered the valley, we were electrified to see a young woman coming on the run.

As she came near we saw she was the daughter of a farmer who had lately come to the neighborhood.

"Why, Lucy, what's the matter?" we called.

"Hide me quick," she gasped. "Crazy Charley's coming with a long knife. Just in fun I asked him to marry me, and to-day when everybody had gone to the Grange he came, and when I wouldn't go with him to Squire Hoffer's he went mad and tried to kill me. I got away from him by taking to the woods, but—oh, dear, I hear him coming now!"

"Go around behind and climb up here," I told her as distant mutterings sent chills up and down my spine. But the maniac must have seen her through the shrubbery, for he made a bee line toward our refuge.

"I seen you, you lyin' hnssy," he screamed, brandishing his knife. "I'm goin' to cut your lyin' tongue out, and I'm goin' to wash my hands in the blood of every girl in this region!"

We had known him as a crack-brained fellow going from house to house seemingly happy if given a place by the cook-stove, where he would sit and chant hymns until summoned to the dinner table. Being a master hand at splitting rails or hoeing corn, he was generally welcome, as he would work for a week for a cast-off vest or a pair of shoes.

Through an open chink we breathlessly watched him try his knife's edge. His hands were trembling, his usually mild eyes glittered, his hat was off, and his stringy hair fell in disorder over his sweaty, convulsive face as he began whetting the knife on a grindstone near.

"If we could only get him started on one of his hymns," I whispered. Flo nodded. I started on his favorite, "There is a Fountain Filled with Blood." I sang it through without any apparent effect on the transformed creature at the grindstone. This was followed by, "I Would Not Live Always; I Ask Not to Stay." Still the ominous whetting.

Then hope died, and I laid my head on Flo's shoulder, waiting for the worst. She drew me to her, and in a strong, triumphant voice began to sing "Rejoice and be Glad," but instead of her usual flute-like voice she imitated his tones.

Lucy sat up and stared. The whetting stopped, then he began to beat time with that long knife, and soon joined in, making the hills reverberate to his measured chant. Gradually the fury faded from his face, and when our parents came a half hour later, smiling at "the music in the air," he had forgotten Lucy's "treachery" and was ready for supper.

Clothes Catch on Shaft

By George E. Hess

I WAS at work in a cement manufacturing plant in the rotary-kiln room, and was in the act of putting a belt on the pulley to start the cement elevator. My blouse caught on a conpling bolt on a line shaft making 120 revolutions per minute.

My first thought was that I would be thrown against a concrete wall, but instead of this my clothing wrapped tightly on the line shaft and I was carried around, head first, 600 revolutions or more, my feet striking on a brick wall and tearing the soles off a pair of new shoes, and one shoe off my foot. No one saw this happen, but the man who worked in the same room heard an unusual noise and shut the engine down. As near as I can judge it was three or four minutes before the shaft stopped revolving.

It took the men who came to my rescue about ten minutes to cut my clothing enough to release me. I was fully conscious all the time and thought of a great many things. I was sent to the hospital, where they found that both my feet were badly bruised, my knees strained, and three ribs cracked. No bones were broken, but one foot was so badly bruised that it required twenty-seven incisions to release the blood. I was in the hospital for two weeks and used crutches about fourteen weeks. This happened about eight years ago and, though I can walk as well as ever, the shock to my nerves will probably never be fully overcome.

The Mightiest Danger

By D. J. Ritter

YOU asked for our narrowest escapes. Will say as I was traveling down life's road in darkness and sin. I came to where the road forked. I listened to the still, small Voice and chose the straight and narrow way which leads to Life. The other road led to pitfalls, disaster, and eternal destruction.

Was She in Danger?

By Mrs. W. B. Clement

SEVERAL years ago I lived in a rather isolated place with a railroad nearby. At that time tramps were very numerous, as I presume they always are in such places, and caused us much annoyance. Our nearest town was a mile and a half away when we followed the road, but by going on the railroad track we could save a good half-mile.

A young lady from a neighboring city was visiting with us at one time and, while here, received an urgent summons to return home, as her father was very ill. It was nearly sundown when she got the telegram, and my father and brothers were away with the horses. Mother stoutly opposed her walking on the track, but she knew she must reach the station within half an hour or she would miss her train, and there was no other before morning.

So she started, Mother watching her with a worried look until she disappeared from view.

We heard what followed when we received a letter from our friend a few days later. She wrote, in part:

"Did you think I was unafraid when I said good-by to you the other day? I'll tell you now that I never in all my life was as frightened, but I looked around in all directions, and not seeing anyone I began to breathe more easily.

"You know that big clump of bushes down the track? Well, I shivered a wee bit before I got to that, and certainly felt relieved when it was passed. But in less than half a minute I heard a rustling in the bushes and out stepped the dirtiest, greasiest, vilest looking tramp that I ever saw. He walked right up to my side, and I tell you if I ever sent up a prayer for help and guidance it was right then and there.

"Good evening, Miss," said Mr. Tramp. "Good evening, sir," I replied. "Please do not hinder me a moment—a second even; I am hastening to the bedside of a sick father and I must catch that train that is almost due now, or I may be too late to see him alive."

"He looked at me out of the corner of his eye and said: 'You are a very brave or a very foolish girl, I don't know which to call you. Don't you know you are running a big risk walking down this track so far away from any house? I wonder that you ain't afraid.'

"Oh, I was," I replied, 'dreadfully afraid when I was alone, but now that I have a gentleman to escort me I feel quite safe.'

"Well, I only wish you could have seen the look that came over his face. He removed his old rimless hat, made me a Chesterfieldian bow, saying, 'Yes, Miss, you are safe this time, but don't try it again. We must hurry now or you will miss that train.'

"I did not need to be told to hurry, as you may well know. Just as we reached the station my train came in, and I had barely time to get aboard ere it was off. I looked back and saw my Knight of the Road standing on the track still holding his old hat. I wonder if anyone ever before called him a gentleman."

In Peril of Dog

By J. R. Paxton

MY NARROWEST escape was a three-days experience with a rabid dog. In 1898 I moved from Iowa to Arkansas with teams and wagons. On the way we lost our dog. A few days later, as we were passing a camp fire that some other travelers had just left, we saw a nice-looking dog lying by the fire.

As we thought we needed a dog my son called him, and the dog came. He picked him up and put him in the wagon by my feet, where we chained him. The dog lay quiet until we camped for the night, when my son lifted him out and led him to water, where he drank heartily and wallowed for several minutes.

Afterwards we chained him to a wagon wheel. As the horses were led past him he tried to bite each one, and did bite one on the nose. For the next two days he behaved quietly, lying at my feet where he could have bit my legs or hands at any moment.

On the third morning he became restless, his bark sounded hoarse, and he tried to bite my wife as she passed. When my son went to put him in the wagon he grew furious, and we began to fear that he was rabid, so we killed him.

In just thirty days the horse he bit went mad and had to be shot.

During the Civil War I fought in every Confederate State except Virginia, Florida, and Texas. I have driven vicious horses, was in a railroad wreck, and in two cyclones. But that three days in the wagon with a rabid dog lying close to my feet makes me feel creepy yet. Never make friends with a strange dog.

Act on Suspicion

By Lida H. Berthusen

THE escapes of my life have been many—and no doubt some of them have been narrower than I had any realization of. But one incident is still fresh in my memory, and I can yet feel the "creeps" crawling up and down my spine when I think of it.

We had a huge pile of baled wheat hay, 15 feet high, in the barn. In looking at the pile from time to time it appeared to me that the top was gradually leaning farther forward. I spoke to my husband about it, and told him I was afraid that the bales would come tumbling down sometime.

He only laughed at my fears. "Yes, the world will come to an end some day."

His jocular did not change my convictions, and I carefully watched the children to keep them from playing in that part of the barn. I also wished that I could in some way keep my beautiful prize Light Brahmas from scratching around there.

One day, needing some litter for hens' nests I went to the barn for it, and there around the base of the mountain of bales was just what I wanted. I glanced hastily to the top. Yes, surely I was right in thinking there was danger of the pile falling forward. I must be more watchful to keep the children away. I stooped down and began to fill my apron with the chaff, when suddenly from overhead came a peculiar rustling, hissing, swishing sound. I knew what it meant. With a backward spring I just managed to escape several tons of the falling bales. It is said that "a miss is as good as a mile," but when that pile of hay tried to "get" me, the mile seemed to me a tremendously short one. The Goodman was not far off. He had seen me go into the barn, heard the racket, and through the open door saw the falling bales. He came rushing in, and perhaps I only imagined a look of relief on his face when he saw that I was safe.

And as for me—well, I never as much as said, "I told you so."

"My Best Investment"

THE "Smoothest Swindle" contest has just closed. It has been an eye-opener. Now let's hear about "My Best Investment." How did you spend or invest your money so it brought you the greatest returns? Perhaps you spent \$150 for a pure-bred bull and increased the profits from your dairy herd \$300 as a direct result. Or possibly you spent \$50 for a spray-pump outfit and got an additional return of \$200 from your orchard. Or perhaps you bought \$3 worth of traps and sold furs worth \$100.

No matter how small or how big your investment, just so long as it returned six per cent or better, we want to hear about it.

The usual prizes are offered: \$5 for first prize, \$3 for second, and \$1 for all others used. Address them to the Contest Editor, Farm and Fireside, Springfield, Ohio. This contest closes January 29, 1916.

Make It Fire-Proof

Build to Weather and Wear, Not to Repair

By B. D. STOCKWELL

A NEIGHBOR was telling me the other day how he kept his farm looking so nice. I asked him how he did it, because I had never seen him spending much time fixing up.

"It's no secret," he explained. "I simply keep a sack of cement on hand all the time. It comes in handy for fixing things up at odd times, and when I fix anything with cement it stays fixed. I'd as soon be without cement as my wife would without a sack of flour in the house."

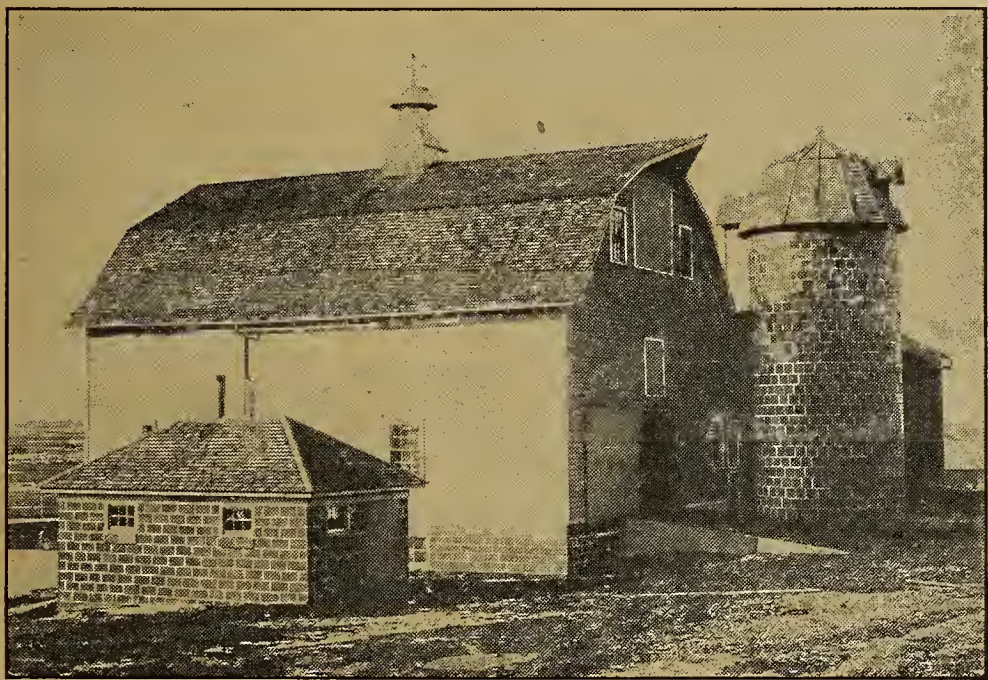
This man has made his own concrete walks, foundations, hitching posts, and a little concrete bridge over a creek. In front of his barn doors and every place that is likely to get muddy, he has a few square feet of concrete.

He's a great hand, too, to discover little things that concrete would improve. For instance, the other day after he had finished making a mighty attractive mail-box post he had some left over. But he had noticed that the clothes

construction is cheap because we do the work ourselves. And besides that, there's no place where buildings ought to be more fire-proof than outside of the corporation limits. The hardest thing about cement work is to mix your first batch and see how easy it is to work with. After that it becomes a habit that's hard to break.

Brick is another excellent building material, and as soon as you get used to handling concrete mortar it's just another step before you see the advantages of brick for lots of uses. I've known a few farmers who had bricklaying experience, and they found many places for brick work on their farms. Brick, to my mind, makes a drier wall than concrete, and anyone who can mix a batch of concrete can pick up simple bricklaying without much trouble. Books can be obtained on it at small cost.

Personally I like a cement mortar, or at least a liberal sprinkling of cement in the lime mortar. It makes a much



Tile and cement—money well spent

posts in the back yard always leaned a little when the ground around them was soft. So he spaded the dirt away from the bases of the clothes posts for about a foot around and poured in the concrete mixture. "Those posts will never lean again," he remarked. "Every day the concrete around them will get stronger, harder, and whiter."

And he doesn't think he's putting on any airs either. "It's not expensive," he said. "This is the way I figure it. The cement costs me 55 cents a sack, and I get a refund of 10 cents when I return the empties. A sack holds a cubic foot. An ordinary mixture is one part of cement to six parts of sand and gravel, so I get between six and seven cubic feet of concrete for 45 cents net cash, or about one cubic foot for seven cents. When I make a cement floor which is four inches thick, I get a square foot of surface for just a trifle more than the price of a two-cent stamp. That doesn't count my labor or the sand and gravel, but I get the sand for nothing out of the creek bottom and the gravel out of a pit where they charge me 10 cents a load, which doesn't break me."

But this man is a demon for work, and he likes mixing up a batch of cement just the way children like to make mud pies. His talk reminded me of a saying I had heard that all cities are built at least three times. First the old buildings that were erected at the very first when the city was a village are torn down and replaced by better ones, usually wooden. Then after about twenty years a fire comes along and burns them down, or else they get so rickety they have to be torn down. The next and third set of buildings are usually of reinforced concrete, brick, or stone, with tile partitions. They are fire-proof, or nearly so.

Can You Lay Brick?

That kind of city building should be a lesson for all of us. I have two hen houses. The first I set on short cedar posts and the second on a row of concrete blocks. The posts cost me \$3 and the blocks \$4.50. In a few years I'll have to put blocks under the first, so where did I save? I didn't, and that's why I'm writing this.

In cities the expensive part about concrete work is the labor and the contractor's profit, but here on the farm concrete

stronger job. Another good building material, and one which can be used to advantage in connection with concrete, is tile. Tile is somewhat harder to work with because you can't pour it like concrete, nor break it neatly as you can brick to just fill out a space. But you can get all sorts of sizes and shapes in tile, and, except for working out fancy designs, tile is a thoroughly splendid material.

For building anything that has considerable height, it is convenient because of its lightness, and the work goes along much faster than in bricklaying. Besides, tile makes a perfectly dry wall and, being vermin-proof, is good for granaries, seed houses, and hen houses. I like the looks of a tile building because it is always so clean after a rain. It doesn't absorb water as concrete does, never needs paint because you don't paint it, and seldom needs repairs. The chief precaution about tile is not to put it underground in a position or in places where water can freeze in it. It's not likely to crack, but it might.

How to Test Tile

Some people have remarked that a tile building looks unfinished. That probably is because it is not very common and the tiles look large in comparison with brick, to which people are more accustomed.

But if you care to, you can stucco or plaster over a tile surface with cement mortar, and you then have a fine job—dry, clean, cool in summer and warm in winter. The air space in tile makes it one of the best materials for ice houses and silos. For silos the tiles are made with the outside face curved, so when put together the silo is perfectly round.

The cost of building with tile is about 10 per cent more than wood construction, and 10 per cent less than brick. These percentages are for the best grades of tile.

To test the quality of a tile, simply strike it a quick blow with a tack hammer. A well-baked tile will ring clear. To compare tiles, put a little water on those to be tested. The one that holds the water longest is the best. Another way is to weigh the tiles dry, then put them in water for a few minutes and weigh them again. Those that show the least increase in weight are the most moisture-proof.



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Ex-Governor of New Mexico

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Geo Curry

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Handles all .22 short, .22 long and .22 long-rifle cartridges, including the hollow-point hunting cartridges. Accurate to 200 yards. A perfect gun for rabbits, squirrels, hawks, crows, etc.

Model 20, as illustrated, 24-inch octagon barrel, 15 or 25 shots, \$12.50.
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Advertising rates and regulations furnished upon request.

HERBERT QUICK, Editor

December 18, 1915

What Cow and Boy Need

IT DEPENDS on what you have to feed and on the cow.

It also depends on how much milk she is giving.

A large cow needs more feed than does a small cow, and one giving milk needs more than one which is dry.

A cow weighing a thousand pounds needs each day, just to keep her as she is, seven tenths of a pound of protein, seven pounds of carbohydrates, and a tenth of a pound of fat.

If she is giving twenty-five pounds of milk a day, she needs just to make the milk one and eighteen hundredths pounds of protein, five and seventy-five hundredths pounds of carbohydrates, and, forty-five hundredths of a pound of fat.

In order both to maintain herself and give twenty-five pounds of milk a day, she must therefore have nearly two pounds of protein, nearly thirteen pounds of carbohydrates, and over half a pound of fat per day.

If your boy is dull in arithmetic, let him work with you on a feeding ration for your own cows. Each cow will vary in weight from the thousand pounds, and the feed will vary accordingly. To find the amount of protein and carbohydrates go through Heury's "Feeds and Feeding" with him and compute the weights from what you have to feed. By the time you have worked out these problems he will see a great new light as to the brains required for farming.

And you may have learned a few things yourself!

Where the Farmers Stand

THE rural counties of Pennsylvania cast their ballots in favor of votes for women. The great cities carried the State for the system under which everybody votes but Mother. The farmers' wives and daughters belong to the class of women whose work is most productive of all women's labor, and the farmer is not afraid to let the women who help him to feed and clothe the world take their share of the burden of governing it too.

The Place for Money

THE place for money for which its owner has no immediate use is in a bank.

The possessor of money which he keeps in his pocket or in the house does a wrong to himself and to the community.

The man who keeps a bank account stands better in the business world than the person with the old teapot or stocking habit. When he wants money the banker knows him and feels like a business partner, and naturally will be more likely to extend him business credit than to a man who never enters the bank except to borrow.

The man who pays bills by check has most of his bookkeeping done by the bank. This is really worth as much to him as a small balance of his money is to the bank. If he has a considerable amount of money which he does not expect to use for some time the bank is

always willing to borrow it of him on a time deposit and pay him interest.

On the other hand, the keeping of money out of the banks retires it from circulation. If all deposits were taken from the banks the greatest panic ever known would result. No such thing is possible, because good business men always keep their cash in banks. There is always, however, a good deal of money held out of the banks by people who are not good business men and by some who ought to know better. If this were all brought out of its hiding places and deposited in banks it would make it easier for the rest of the world to get money for the development of business.

Money in bank is not only entrusted to the bank, but is placed where the business and farming community can have the use of it.

Make the bank responsible for the safe-keeping of your money, be it much or little, pay by check, have your books kept free of cost, get what interest you can on time deposits, and swell the great river of liquid money by your contribution.

In other words, open an account in the bank.

The Tariff and Our Bills

THERE is a campaign in progress under the auspices of the unofficial body called the Chamber of Commerce of the United States for the establishment of a permanent tariff commission. The two great objects of the proposed commission are to take the tariff out of politics, and to adopt a budget system for the United States.

As long as a tariff exists it must be under the control of Congress, and will, therefore, be in politics. The most that any tariff commission can do is to make such a study of facts as the average member of Congress cannot make for himself, and to give Congress the benefit of that study, and perhaps to take off the hands of the legislators some details in the adjustment of schedules.

The matter of a budget is more important because more practical. Congress makes up the huge appropriation bills without accurate knowledge as to how much money will be required when the grand total is footed up, or how much money is in sight to pay the bills. The Government of the United States should make up a budget and cut its garments according to its cloth, just as any good business man should do.

The literature sent out by the Chamber lays down the principle that the President and his Cabinet should prepare the budget for the guidance of Congress. Someone responsible to the whole people should do so, and it is difficult to suggest anyone more competent than the officers named.

Training in Home-Making

"NINETY per cent of the women in the United States do their own housework. Hundreds of girls leave school at the age of fourteen. I think that every school in the United States should teach this work in a practical way, so that when a girl leaves school she can cook a simple meal, set the table nicely, dress neatly, and keep things orderly."

These are the words of a woman who is making good in teaching the very things of which she speaks—Mary R. Rausch of the University of Washington. Such teaching as this would not be necessary in many homes if it were not for two things in the conditions and dispositions of the mothers of America. One is the fact that the housewives are not able to find the time to teach their daughters. Anyhow, in most homes the training of the girls by even the best home-makers is neglected.

The second reason is that so many American mothers and fathers have accepted the belief that girls will learn these things when they are forced to do so. Many a bride's early married life has been darkened by this error.

Our Letter Box

Ten New Friends

DEAR EDITOR: It was twenty-five years last February that I received my first FARM AND FIRESIDE, so you can see why I cannot get along without it.

Times have changed some since then. I now have a family of wife and nine children, and they all like FARM AND FIRESIDE.

A. O. D., Indiana.

Jim Irwin's Plan Worked

EDITOR FARM AND FIRESIDE: I want to thank you for the entertainment in your story, "The Brown Mouse." I was interested in Jim Irwin because I, too, was brought up on a farm and received most of my education, such as it is, by poring over books at night.

The story not only brightened a good many evenings, but it helped me to get rid of a pocket gopher that had invaded my garden and was doing an almost unbelievable amount of damage. He appeared early in 1914, and took up his abode in my cabbage patch where he would cut down two or three every night, till he got fifteen altogether.

I did almost everything except poison the cabbage, but to no purpose. Last February he moved his quarters to my parsnip bed, and when I went to dig my parsnips I got less than a peck when there should have been two or three bushels. I had just decided to write FARM AND FIRESIDE to see if they could tell me what to do when the instalment containing Jim Irwin's plan came. I did not have raisins in the house; but since the gopher liked parsnips so well, I thought I would try them first. I split two and put the poison in them, set them in the opening in the gopher's mound, and have never seen any sign of him since.

Mrs. S. C. P., Montana.

A Clover-Seed Gold Mine

DEAR FARM AND FIRESIDE: When clover gets into the game of making seed for fair, the grower has a bonanza business these days.

In the Twin Falls district of Idaho one white-clover grower, with a crop of 17 acres, is reported to have harvested 375½ bushels of seed from his 1915 crop, which sold for close to \$6,000.

In the same district red clover yielded from three to eight bushels per acre.

When the seed crop "blasts," or there is failure of proper pollinization, the profit is easily counted.

These crops were grown on an irrigated tract owned by a land syndicate having control of about 4,000 acres.

C. M. B. BERRYMAN, Idaho.

Mud About the Buildings

FARM AND FIRESIDE: I believe that the petroleum product used for road-sprinkling may solve the mud problem on my farm and many others that are annually mud-ridden. Draining and shaping driveways, paths, and permanent poultry, hog, and horse yards would insure hard, mudless footing winter and summer. Further, the dust nuisance would also be overcome. Incidentally the oil might put a crimp in the activities of lice and disease germs that prey upon stock.

A solution of the mud and dust problems without the necessity of putting in concrete walks, drains, and feeding floors would be a big boon on many farms. Who has tried oil for this purpose? CHESTER C. REYNOLDS, Illinois.

A Real Woman Farmer

DEAR EDITOR: This is the experience of a woman who in middle life came from the city of Boston to make a home in the West, and who is solving its many problems as they present themselves.

Bred in luxury in a great city, Nature's key of interpretation was not in my possession. The hoot of the owl, the fall of a twig, the stare of the docile cow, the swish of shrubbery terrified me; even the moss-covered earth into which my feet sank had a nameless fear for what it might conceal. Gradually I adapted myself to my new home and strange surroundings, and have long since been initiated into the brotherhood of Nature's dispensers of her treasure.

In the earlier day, timber in the form of shingle bolts and piles yielded the necessary income from the place. While the timber was being removed the cattle industry was neglected, and the ranch was running down fast. Here was my opportunity, for I had early observed that land without cattle would soon cease its returns.

Seven years ago, with two cows to feed and small stock which I bought from my neighbors, I commenced business as a real producer. My small in-

come was supplemented by boarding the teacher and mill hands. Unassisted, I myself cared for my herd and attended to my housework.

At the Alaska-Yukon Exposition I bought a registered Ayrshire bull and commenced to improve my herd. I keep all the increase and feed steers for market. With the assistance of a boy I milk 22 cows, and in connection with my dairy I run a little poultry yard and buy hogs at four or five weeks, dispose of them at six months, always receiving top-notch prices. Dairying is a side issue now. The ranch of 240 acres produces much grain and hay. Its entire management is under my immediate supervision.

My plan for the future is to dispose of all my stock early in the spring, take the following year for observation, and study the Ayrshire breed, in anticipation of beginning a dairy with pure-bred stock.

Mrs. J. T., Washington.

"As Others See Us"

Wants More Pictures

OLD FARM AND FIRESIDE is still welcome at our house. We used to get it when I was a boy, nearly forty years ago. In your issue of August 14th you had a fine photo illustration on the front page, also the Panama Exposition cuts. Give us more pictures and often, and various large-size country views and farm life.

J. F. EICHENBERGER, Ohio.

Interested in Tractors

WE TAKE your paper, and I like to read it very much. I have become very much interested in your pictures and talks about farm tractors.

J. E. CONART, Alabama.

Thinks It Underpriced

I MUST tell you how I enjoy FARM AND FIRESIDE. Such nice, plain pictures! If you could see how I grab it from the mail man you would think I like it. Seems as if I owe you for every paper; feel almost guilty to take such a good paper for so small a sum of money.

You give too much for nothing; raise the price. We feel in debt to you; we feel as if we are taking all and giving nothing.

ALICE WOODWARD, Oregon.

From Son to Man

MY SON has taken FARM AND FIRESIDE ever since he was a little chap too small to read the big words. He graduated from high school last spring, and working on the farm with his father he finds the paper more useful than ever.

Mrs. ALICE S. ALLYN, Connecticut.

After the Smooth Swindlers

I HAVE been reading your paper some time, and I often wonder how and where you get all the news you print. You must have some "spies" stationed over the United States, but that is all O. K. I am glad to see you are after the swindlers now.

BERT RICKETTS, Ohio.

Bits of Good Humor

Real Mistakes

"Why is he such an utter failure? Does he jump at conclusions?"

"No; on the contrary, he seems to be quite methodical about making his mistakes."

There's a Reason

"He used to dance with Aunie,
She waltzed with fairy grace;
He used to drive with Fannie,
She had such a pretty face;
He used to call on Clara,
She always praised his book;
But he finally married Mary,
For she knew how to cook."

Easily Detected

WAITRESS—"And how did you find the apple pie, sir?"

DINER—"I moved the bit of cheese aside, and there it was."—Pennsylvania University Punch Bowl.

Hope

"Yes, she rejected me, but she did it in a most encouraging way."

"How was that?"
"As I went away, she pointed to the footprints that I had made on the carpet, and said: 'The next time you come to propose to me, I want you to wipe your shoes clean.'"—Der Guckkasten.

A Letter from the President of Fairbanks, Morse & Co., to every Farmer in the United States

Subject: New Type "Z" Engine
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I'm writing this letter personally because I want you to realize that there is personal responsibility back of every Type "Z" engine sold. If you buy a Type "Z" it must "make good" or we would not let you keep it.

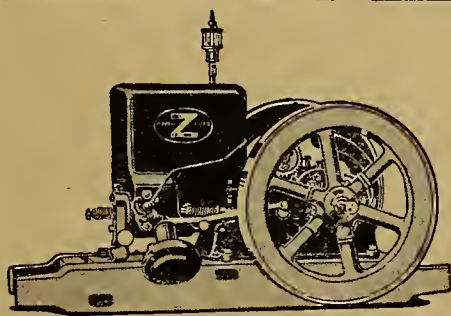
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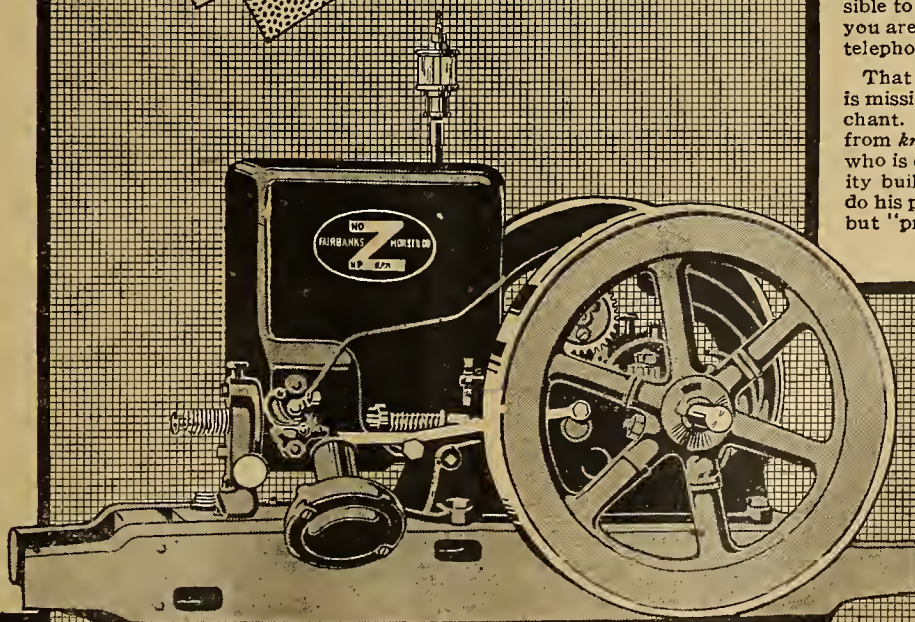


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When you buy an engine from your dealer you deal with a local representative of the manufacturers. He shares their responsibility. He stands behind the engine he sells. He's responsible to you. He's at your service to see that you are satisfied. And he's as near you as your telephone any time you want him.

That "well I guess it's up to me now" feeling is missing when you buy from your home merchant. You have instead, confidence that comes from knowing that you are dealing with a man who is equally interested with you in "community building" and the dealer knows he cannot do his part with merchandise that has nothing but "price" to stand on.

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Wonderful bargain, built from best materials with latest improvements. Genuine California Redwood. Double doors—Deep Nursery—Copper Hot Water Heater—Double-Disc Regulator—Safety Lamp, Fester, etc. Takes The Guesswork Out Of Hatching. 100 per cent hatch common. Hundreds of dead air cells protect eggs against sudden changes. Incubator alone \$7.85—with Brooder, \$9.85—1st. paid E. of Rockies. Money back with 8 per cent interest if not satisfied. Order today or get big free poultry book and special new Combination Offer. **Progressive Incubator Co., Box 142, Racine, Wisconsin**

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Send name on postal today for fine incubator book, free. Read description of our 150 Egg William Incubator, \$4.95. Has double walls, warm air beat, durable lamp, strong egg tray, deep, roomy nursery. Thermometer, egg tester and instruction book free. Also read about our great Hot Water Incubators, \$9.85 to \$12.95, saving you \$6.00 to \$20.00. Book also tells many interesting facts about Poultry Raising for Profit. Early hatches mean big prices for eggs and broilers. Get our book now—free.

Charles William Stores 532 Stores Bldg. New York



Poultry-Raising

Economical Housing

By L. H. Cobb

HEN HOUSES need not be expensive to be good. The house I shall describe is as cheap in construction as any house can be, for it is only a shell, and the material is as low in price as it is possible to get. Three sides and the roof are covered with rubber roofing. Cheap as it is, no house could be better suited for successful poultry-raising. I have used it, and I know my hens were happy and contented all winter and laid plenty of eggs to prove it.

The house here described will provide roost room for 150 hens. It has a scratching floor 20x24 feet, which allows about three square feet to the hen, provided the roosters sit on the perch and watch them.

Plenty of scratch room is absolutely necessary if we would get winter eggs. Hens never seem to mind blizzards, snow, or any weather irregularities if they have a dry, well-lighted scratching place and ample straw in which to work for grain.

The material required is:

ROOST	13 pieces	2x4"x20'.
PURLIN	15 pieces	2x4"x12'.
	3 pieces	2x4"x16'.
	1 piece	2x6"x20'.
		1,200 feet of boards.
		18 2x2" sash bars.
		2 boxes of glass.
		12 rolls of rubber roofing, and nails.

Use 16-foot boards so as to cut without waste. Properly sawed there will be absolutely no waste on the sides, but if you go at it hit and miss you will waste a lot. The roof slant is two inches to the foot. Measure 10 feet on one edge and 2 inches less on the other, provided the board is full 12 inches wide, and saw. Your long piece fits at the front, and the shorter one 6 feet from the rear. Every board you saw now will make one piece for the high side and one for the low side, until they come together. Two boards rightly sawed will exactly fill in the other 6 feet.

For the roof it depends on whether you want to let it extend over at the rear to carry the water beyond the house. This is a good idea, unless you want to provide a drain just under the edge of the building. Twelve-foot boards for the roof will just about cut to fit, with none to extend over, and the building would have to be slightly under 30 feet to allow for the slope. With 16-foot boards the full 30 feet can be allowed, and have an extension of 8 or 10 inches front and back. This will make about 40 feet difference in the lumber required.

I use a purlin to extend up the center under the rafters to strengthen the roof, and every 6 feet a supporting post. These posts should have a flat stone under them, or be set in cement, for the weight of the roof will bear heavily on them. Some places where heavy snows are apt to lie on the roof, two purlins and supporting posts may be required.

Get All Sunshine Possible

The glass front is not absolutely necessary, but it keeps the rain and snow from beating in, and allows the sun to shine well back. The lower half of the wire-screened front should always be open. It is not a bad idea to let the glass in your sash come an inch or two short of the top, leaving a little ventilation over the glass to help keep the building cool in the summer. It will be still better if all the glass is removed during the heated period.

The sash bars rest directly on the 2x6-inch piece, and the glass is butted, one on top of the other, instead of lapping. Get the heavy zinc glazing nails used by florists and you can easily fasten the glass in place, and these nails can be removed readily when you want to take the glass out, yet you need not fear the glass loosening. Use 12x12 or 12x16 inch glass, for these sizes are cheaper per box of 50 feet than the larger sizes. If a glass gets broken it is not so expensive to replace as larger sizes. A few panes will be left for repairs, provided you do not break too many in putting them in place.

For very cold weather a muslin curtain may be suspended from the second rafter, coming just in front of the roosts and extending to 6 inches below them. This keeps in the air heated by the bodies of the fowls and yet allows for foul-air drainage.

I make roosts removable. Two-by-four-inch pieces laid flat make ideal roosts, for I find that hens, though they will roost on the edge of a board if they have to, prefer a flat surface.

The sides of these houses furnish ample space for feeding hoppers, nests, water fountains, and all the necessary adjuncts of a modern establishment.

THE world's record for the largest number of poultry entries in a poultry show belongs to the New York State Fair, which at its annual fall meeting, 1915, had over 9,000 specimens on exhibition, shown by 432 exhibitors.

The "Big Three" Breeds

THE dual-purpose popular breeds—Plymouth Rock, Rhode Island Red, and Wyandotte—not only lay heaviest during the cold winter weather but keep laying longer in the fall after being on the laying job through the year. They therefore yield a larger proportion of high-priced eggs.

At the Connecticut Egg-Laying Competition, which closed October 31st, 44 pens of the "Big Three" breeds averaged 28 eggs per pen, and the same number of pens of Leghorns laid only 15 eggs per pen during the final month of the contest.

Reckoning the eggs at the current market price at that time in Connecticut markets, the income of the heavier breeds was \$18 greater than that of the Leghorns from the 44 pens of each compared for the last month of their laying year.

Place for Inbreeding

WHEN we advocate inbreeding to many poultrymen, the effect is about the same as flaunting a red rag before a bull. The majority of poultry keepers refuse to acknowledge anything good in it. But there are many degrees of inbreeding, and also safe and dangerous ways of going about it.

Line-breeding is only another term for careful inbreeding, and has been responsible for practically all the heavy milking strains of dairy stock, and more recently for the best laying strains of poultry.

It is safest, however, to let the experienced poultry breeder experiment with inbreeding, and after he has successfully produced heavy-laying stock or prize-winning exhibition stock that is full of vigor pay him a good price for a breeding male or foundation stock according to your needs.

\$100 Brown Leghorn

WHITE LEGHORNS have so filled the public eye of late years that poultry laymen might be led to think the Brown Leghorn, once so popular, is entirely out of the running. Nevertheless there are occasional poultry plants and farm flocks where the owners continue to swear by the brown variety. They scoff at the idea of replacing their brown beauties with fowls "that are white and trim for a few weeks after molting, and under average conditions a dirty, bedraggled bird the remainder of the year."

H. J. McClung is a Texas champion of the Brown Leghorn who for a dozen years has aimed in his breeding to make his strain furnish exhibition winners and fair layers as well.

Mr. McClung's strain of Brown Leghorns are larger than the standard Leghorn; mature cocks run from six to seven pounds, and hens five to six pounds.

The cock pictured was sold by Mr. McClung last year for \$100 after he had won five first prizes. He has also sold a hen of the same strain for \$50.



This cock, selling for \$100, is evidence of Brown Leghorn value

Poultry Team-Work Wins

AT THE recent national exhibition at Toronto, Canada, in the commercial egg class open to all, there were one, six, and thirty dozen lots of eggs on exhibition. The winners of the first prizes were five co-operative egg associations, namely: The Dundas Co-operative Egg Association, the Prince Edward Island Co-operative Egg and Poultry Association, the Lansdowne Egg Association, the Ormond Association, and the Wyman Egg Association.

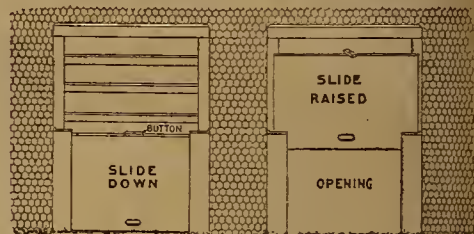
Individual poultrymen and tradesmen had to take second place to the co-operative egg associations.

Poultry-Yard Slide

By John L. Woodbury

ALWAYS like an opening between adjoining poultry yards so the birds may be easily changed about without the trouble of catching. The framework should be two feet high if nailed to base-board of run, but if driven into the ground increase the length six inches.

To raise slide, lift it by the finger slot, and when raised high enough turn button so as to rest on top of one of the strips, which should be set in flush with face of frame. Fowls may be more



readily driven through an opening if it is placed about three feet from a corner, as when running along the netting they naturally turn on nearing the other fence.

SKILL in marketing determines whether farming is a business or simply an occupation.

What Good Feed Does

By Frank W. Orr

IF ONE pen of your hens cared for by Son Joe laid only one dozen eggs per week and another pen tended by Son George laid six dozen per week, and continued this same rate of laying throughout the year, you would investigate the matter, wouldn't you? And if you found each pen contained just thirty hens of same age and hatched from eggs laid by the same parent stock, the problem would become right interesting, wouldn't it?

Mr. Prentice Moore, poultryman at the Idaho Experiment Station, cared for two pens of White Leghorns, 30 pullets to the pen, from November 1, 1914, to November 31, 1915. These hens, in both pens, were progeny of the same parent stock, and looked equally promising at the beginning of the test. One pen averaged 24.6 eggs per hen during the year, the other 128.5 eggs per hen. Both lots were confined in yards 50 feet square, throughout the year.

The poor-laying hens were fed a mixture of fifteen parts wheat, two parts oats, and two parts barley, also grit and green food, but no mash.

The hens in the better laying pen were fed a grain mixture composed of twelve parts wheat, two parts corn, three parts oats, two parts barley, one part kafir corn, one part millet, one-half part sunflower seed, and one part buckwheat. They were also fed a dry mash made up of one part wheat meal, two parts bran, two parts white shorts, one part cornmeal, two parts fish-meal meal, and one per cent charcoal. This pen was also fed oyster shell, grit, green feed, and dry granulated bone.

Both pens were fed the scratch feed in deep litter.

The hens in the poor-laying pen not only averaged less than one fifth as many eggs, but produced a much larger proportion of small, unmarketable eggs than did the better laying pen.

The hens were weighed on the last day of each month, throughout the year, and it was found that the hens with a limited ration could not maintain their body weight when laying, but the well-fed pen maintained quite a uniform weight while laying over five times as many eggs.

Had the pen fed the limited, unbalanced ration had free range, this showing, of course, would have been less striking. Nevertheless, during the winter months, when egg prices were highest, they would have been under the same disadvantage as the hens confined in the small yard.

The pen that made the better record made only a fair average production for having such excellent care and favorable feeding. The origin and former breeding of these hens was not known, but they were of a good quality of White Leghorn stock.



Farm Notes

Anti-Freezing Solutions

By W. V. Relma

THE freezing problem is one that confronts the autoist and gas-engine owner now. The radiator must be protected.

First see that the radiator is in good condition and free from leaks and defects of circulation. It is well to drain and flush the radiator thoroughly before filling with any anti-freeze solution.

There are three commonly used anti-freeze solutions—glycerin, denatured alcohol, and calcium chloride. Any of these, depending upon the strength of the solution, will prevent freezing.

Glycerin has the disadvantage of being very hard on the rubber-hose connections. Besides, it is rather expensive and, as a rule, is not popularly used unless it happens to be more convenient to obtain than some of the other well-known agents.

Calcium chloride has a tendency to form scales, and these in turn will clog the radiator, otherwise it is a very effective solution.

Denatured alcohol is the most popular anti-freeze agent, and has none of the defects of the other two mentioned, but it is rather explosive. For instance, a careless chauffeur, believing that his cooling solution was running low, decided to investigate. It was evening, and after he had removed the radiator cap he found that he could not see the height of the contents of the radiator. So he struck a match and looked down the radiator opening—and lost his eyebrows.

Be Ready for Emergencies

The problem of replenishing the evaporated solution is most usually taken care of by having an extra supply of the proper mixture ready to pour in as necessity demands. With an alcohol solution the evaporation on warm days will be greater than on cold days. The mixture which is right for cold days will have a tendency to steam on warm days. Also, the alcohol evaporates more quickly than the water.

A small sample of the cooling solution used may be kept in a corked bottle and left exposed to the weather. The effect of the weather can thus be observed and the strength of the radiator solution changed accordingly.

There are also a number of commercial anti-freezing compounds on the market which evaporate slowly and are very satisfactory. Here are the standard home-mixed preparations:

Thirty per cent alcohol, good to 5 below zero; 40 per cent alcohol, good to 20 below zero.

Twenty per cent calcium chloride, good to zero; 25 per cent calcium chloride, good to 20 below zero; 30 per cent calcium chloride, good to 50 below zero.

Twelve and one-half per cent alcohol, good to 10 above zero; 12½ per cent glycerin, good to 10 above zero.

Forty per cent alcohol, good for 25 below zero; 15 per cent glycerin, good for 25 below zero.

For emergency use you can use salt, kerosene, or thin lubricating oil, but these are makeshifts and not to be generally recommended.

He Got His Rosebush

A READER wants to know just how he can tell that we have received his renewal. That is a good question, and in answering it we want to explain some other matters that come up every year concerning subscriptions.

Though all correspondence concerning subscriptions is handled within twenty-four hours, naturally a great many letters cross in the mails. For instance, the day that a renewal is received, an expiration notice may have just been mailed. Subscribers as far away as California and Maine sometimes do not take into account the time required to receive a letter, and begin to worry that their remittance was lost. So they write us at once. There is usually no cause to worry. Leave that to us. Just wait and you'll notice the date on your label extended, which means a renewal, and that is your receipt.

The incoming mail amounts to as many as 17,000 letters in a day, and deals with many different things. Sometimes a person will send a dollar, saying, "Send me

FARM AND FIRESIDE for a year and use the rest to order a good poultry paper for me." We take pleasure in rendering a service of that kind, and if there is a balance we refund it. Sometimes a man will say, "I want FARM AND FIRESIDE, also a good magazine for women, and one for a boy twelve years old." Of course opinions of magazines differ, but we make the best selections we can, judging from the tone of his letter, and thus far we have yet to receive a single complaint about the magazines sent.

In the publishing business there are lots of combinations of magazines, clubbing offers, and similar inducements. The busy subscriber may be interested in the fact that we can get any one or any combination of magazines for you at the same or less price than it would cost anywhere else. Simply send in the offer and the date it expires and ask us to fill it for you at the same price. This applies to all magazines and books.

Answering questions of all kinds is a part of the regular work, and anyone living in a home where FARM AND FIRESIDE is taken has the right to ask us about anything. Some readers ask a dozen questions every few weeks about problems they want help on, or about the best places to get special machinery or seeds. The more often they write the better we like it. Only occasionally are requests of such a nature that we must say "No." Once a man wrote in, saying, "I have forbidden my wife to take your paper. Don't send it to her if she subscribes." That was a request we could not comply with, because we are obliged to send the paper when it is ordered.

The Names on Our List

On the other hand, a person is sometimes too considerate and won't let us do as much as we should like to. One man in renewing said that he didn't see how we could sell FARM AND FIRESIDE at so low a price, and though he wanted a rosebush as a premium he felt that he shouldn't ask for it. "It was asking too much," he said. But we sent the rosebush just the same.

It takes time and money to learn a business. Six men holding responsible positions have been with us over thirty-five years, and a dozen more for over twenty years. Altogether it takes about 900 people, about half of them young women.

You might think the work of looking after all the mailing lists would be uninteresting. But Mr. Thomas F. Bolger, who has been the custodian of names for twenty-eight years, looks at it differently. To him the stencil from which the label on your paper is printed is more than a record: it is human. This is the way he feels about it:

"When a person first subscribes, that is his birthday in my department. We write the name on a little parchment two-by-four card, just as though we expect him to be with us one hundred years. We do not use common pen and ink. No, that would fade before we wish to part. So we puncture the name in the parchment card with pin-point type, and in addition give the date at which the subscription expires. But this can be changed as the subscriber sees fit to renew.

"Oh, how we watch that subscription date, and when it draws near we wonder will it be extended or will we mourn a subscriber friend as one that is gone."

Spend Wisely

THE United States Government and the Nebraska Experiment Station have completed a study of farm profits. They investigated the management of a large number of farms in three Nebraska counties and have come to the conclusion that profits come not so much from spending less money but rather from spending it more efficiently.

In one county the average expenses on fifteen farms averaged about \$200 per year more than on fifteen other farms. But the first fifteen farms were the most profitable, and the other fifteen were the least.

This is not surprising. The problem of good investments is as important on the farm as in any other line of business. No hard and fast rules can be laid down, but good land, good seed, good live stock, and good farm equipment are nearly always safe and profitable investments.

Fur Prices Up

AT AN auction sale of over a quarter of a million dollars' worth of furs, bids averaged about 170 per cent higher this year than for skins of similar quality two years ago. The government Alaskan blue foxes were included.

AFTER a car has been idle for several months the tires are likely to be weak, though they may look perfectly sound. Then is the time to provide the extra tires.

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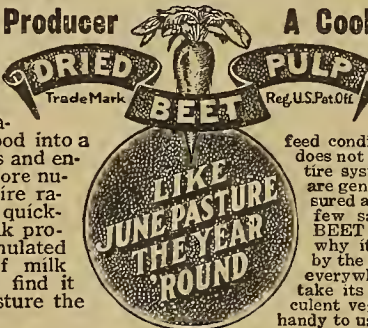
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Last year the entire Beet Pulp crop was taken by old customers almost at the first announcement. Now the new crop is ready—orders are pouring in from dealers for carloads. You will want your share of this great milk producing feed, too. Don't be disappointed. Speak to YOUR dealer at once—tell him to be sure to order Larrowe's DRIED BEET PULP—then you will be sure of getting the freshest, cleanest Beet Pulp you can buy. Look for our trade mark and guarantee on the tag of every bag.

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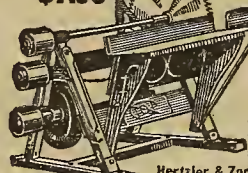


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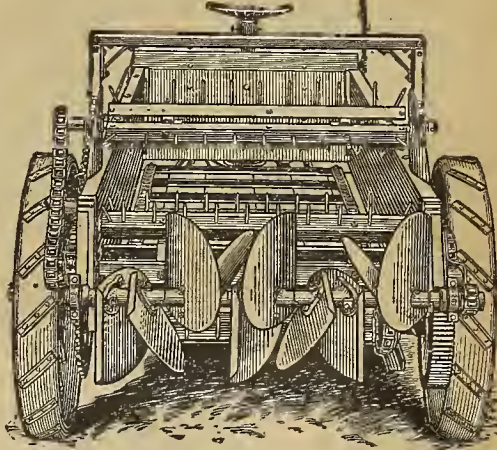
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Dora's New Kitchen

A Perplexing Problem That a Young Wife and Husband Solve

By AVIS GORDON VESTAL

A NICE, large kitchen," Dora Delaven had thought when she and her Big John and Little John moved to the Delaven homestead upon the retirement of John's parents to town. After some months of use, however, Dora's "tune" had changed. "Wearing a medley of paths across it requires too much wasted time and strength," she decided. So, with her Best Young Man's help, Dora revo—no, evolutionized her domestic workshop.

Dora's food factory is now as convenient as can be, and, like a certain advertised beverage, "there's a reason" for it. Her story tells what the proper arrangement of furniture and tools and supplies can do to make her work efficient. She has studied how to save time and strength and confusion and money, and how to raise the standard of the family life through order and neatness.

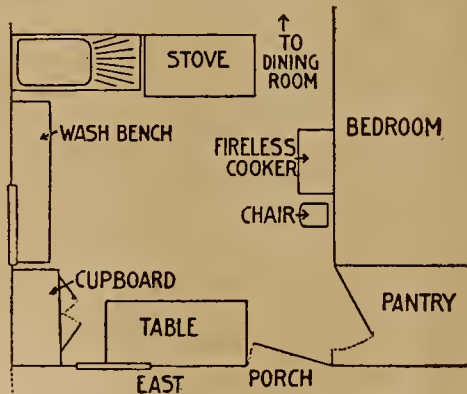
Miss Dora found a room measuring 11½ feet from north to south and 12½ feet from east to west. The sink and drainboard were already set, but she

was free to locate all other furnishings, with only such limitations as were imposed by doors and windows. The walls were of smooth, hard plaster, with a three-inch molding strip at about waist height, except in the sink corner, where it was higher. Instead of papering them Dora had them painted a warm brown below the molding, where most of the hard wear comes, and a cheerful buff above that and across the ceiling. The walls are easily washed and sanitary, restful to look upon, and the buff increases the sunshine of the room as dark walls cannot. These walls, which certainly earn their standing room, were broken by two windows and three doors.

The Delaven kitchen, like very many others, has to be a generalized workroom, sheltering the laundry as well as the proper kitchen functions of food preparation and dishwashing. At first young Mrs. Delaven made the mistake of using her large kitchen just as the old-fashioned general-utility kitchen has been used for generations, with the several labors overlapping in their equipment, and furniture and tools used for a common purpose separated by the width of a generous floor. Her wash bench stood against the south wall, and she tramped past it "steen" times daily for utensils and china stored in a "whopping" big cupboard set in the southeast corner. This "elephant," a relic of her bridal days, was too wide for any other placing in that room.

Dora Saved Time

The time-honored place for a table is against a wall, so Dora took long pedestrian jaunts while hers stood against the east wall. With all portable equipment



The old kitchen

neatly hidden in the pantry and cupboard, and with the table isolated from both stove and sink, she wasted "oodles" of time getting things out from their scattered abiding places and putting them away afterward.

Now, almost, she dubs her work "play." Her various tasks move along with relatively little friction or waste. She has

experimented to gain efficiency in her work such as her John aims at in his farming and such as her city cousin has in his factory. While some of Dora's problems were individual, most of them were typical of those faced by all housekeepers who aspire to raise their standards and to turn off the necessary work of their households in such a manner as to leave some time and strength over for the art of living.

First, Dora measured wall widths and furniture. Also she measured the heights of her several working surfaces—those of sink, table, and the like. A notebook and pencil kept her yardstick company while she scribbled dreams and dimensions. Followed, a family "conflab." As the young people did not own the house, their improvements, except the shelf, were made portable. Came several evenings of fun, with Husband playing amateur carpenter. John had only the ordinary tools that most haughty men keep for repairs about the house and barns. Lacking a carpenter's bench, they laid



Everything is well cared for in a place like this

their pine boards across the wash bench, and Dora sat upon them to hold them firm while John sawed.

After the rearrangement of the furniture and tools and the addition of the storage places John "cobbed up," picture the resulting "kitchen within a kitchen," as Dora dubbed it. An invisible wall now separates the laundry from the kitchen proper, which is concentrated in the southwest corner of the room, occupying but 7x8½ feet. No space is wasted, yet the cookshop is not crowded. Everything has its one best place, unchanged until experiment reveals another a shade more convenient. Two principles underly the kaleidoscopic shiftings of the furnishings until settled quietly into their present serviceable relationships. Things used for a common purpose should be grouped together, within arm reach if possible. The more fully wall space is utilized the less floor room is required.

In a row along the east wall stand the laundry tools grouped together and separated from the cooking installation. The washer, recently purchased, stands between the back door and the window. The bench, of "Delaven craft," sits under the east window and supports two tubs and the basket on Monday. Through the week the tubs are nested on the floor beneath, and the waste-paper basket sits on one end. When Baby John is in the kitchen his bassinet, made from a padded clothes basket, is set upon the bench, and he lies there by the hour while his mother works. John bought a hose to fill the tubs from the sink.

A chair with a cushion starts the series along the south wall. A home-made fireless cooker is beside the window. John thoughtfully made legs for it so that Dora need not stoop. Its top is even with the window ledge and it serves as a supplementary table when Dora sits in her chair paring potatoes by the cheerful south light.

On one casing of this window a nail was driven to hold the much-used yardstick ready at hand. A second nail holds a short cord with a loop in the end. It can be stretched across to the other window when, on a rainy day, little John's clothes must be dried in the house.

The west casing of this same window

bears a radiating rack for dish and hand towels, cleaning cloths, and apron. Above it, an idea of her interested man's, is a tiny bracket shelf footing an alarm clock. In the earlier days she had "chased" to the dining-room to consult the big clock there.

Now comes the most-used portion of her improvised kitchenette. There were forty-one precious inches of wall between the south window and the sink. The sink was small and, with its single drainboard, inadequate to hold all of the soiled and clean dishes. Moreover, the utensils and china ejected from the baulished cupboard clamored for a home. (Did I tell you Friend Cupboard is still "on the job" as a bookcase in Dora's bedroom?)

John Planned Some Things

Two heads thought as one to solve this problem. Remember, the three-inch molding was the only thing that could be used for attachment? The master

suggested the shelf, the mistress designed the new utensil cabinet. Extra nails driven into the strip enabled it to bear its burden, a ten-foot shelf, six inches wide, put up with brackets and painted to match the wall. The shelf is fifty-six inches above the floor, and Dora, who is five feet, can reach it easily. At the corner the shelf turns, and embraces the west wall above the sink.

The south shelf bears flavoring extracts, a lump of paraffin for starch, the bottle clothes sprinkler, cereals in tin coffee cans dressed in varnished tile wall paper and labeled in ink, and serving china. Dora finds the dining-room the most convenient storage place for all tablewares except those answering "Yes" to the question, "Is it filled in the kitchen?" So the shelf gives to her hand vegetables and soup dishes, cream pitchers, and "such."

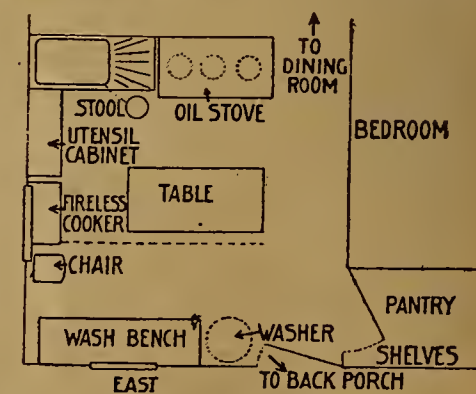
Above the sink the continued plank holds cleaning and scouring preparations, silver polish, and the like. Nearing the stove its company changes to a can of spices, an aluminum cereal cooker, and the coffee pot flanked by the coffee and cocoa tins, and neighbored by the teapot with its supply.

The faithful molding bears another burden suspended from neat screw hooks—not nails, notice. Dishwashing paraphernalia and small cooking implements are here.

An open kitchen, you may call it now, since Dora D. has sloughed off her ancestral prejudices against shutting everything up behind closed doors.

"But, don't things get terribly dusty?" people ask her in a tone indicating that a scandalous affirmative answer is expected.

"Yes," she gratifies them, "and no," she finishes emphatically. "Things get



The new one

just as dusty in the ordinary pantry, unless removed and washed several times a week. And soil sifts in around our cupboard doors too, only we are not looking to see it. Notice that the exposed articles in my kitchen are used—and washed—daily or several times a week, and that foods are all in covered containers, each of a surface easily

wiped with a damp cloth, as is the shelf. "Then," she continues, enjoying the shock, "I rarely sweep the kitchen."

"I did not say I never clean my floor. I use an oil mop every day. The floor is of oiled maple. The mop gathers up all of the fine 'flyey' dust, and it is shaken out of doors. I follow with the broom and a long-handled dustpan only in such spots as have fallen crumbs or other coarse litter. I mop my floors with water once a week."

Dora's pet is the utensil cabinet which works in harmony with the sink it supplements. Baking pans and preserving kettle, less often used, have the floor. The "top-o'-the-stove" utensils, in daily demand, have the shelf. A buff denim curtain, sliding easily upon a brass sash curtain rod, protects the vessels from dust and sight. Dora always puts her pots in the same spots, so she can remove any one she needs, without stooping to look for it.

Near the three-burner kerosene stove hang griddle, skillet, colander, and a wire pot-lid rack. The oven, when in use, is above waist height, not below it, and hence is easily watched. The metal shelf supported by the back of the stove "feeds the cooking." Here are matches and a receptacle for burnt matches, salt, pepper, shortening, a covered cup for drippings, sugar, soda, and paprika.

This is the first of several household articles by Mrs. Vestal. Others will be printed in early issues.

The work table, shod with casters, abides in the center of the room.

The abbreviated corner between the pantry and outside doors holds grouped the equipment for another industry. Clamps upon the molding hold broom, oil mop, water mop, and a hook above supports the dustpan.

The pantry, or "grocery store," holds reserve staple supplies and bulky tools, such as the wringer, washboard, irons, ironing board. Even this has been entirely rearranged. Things used most often are near the door; laundry supplies, weekly servants only, at the far end. In winter the door is closed and the window raised, and food keeps as well as in a refrigerator. Dora's canned fruit and jellies have migrated from the cellar to the highest of the arm-reach shelves, and not a single jar has spoiled in several years, despite the prophecies of the advocates of the cellar-stair route.

On Tuesdays the table is rolled into the laundry and placed parallel with the south window, where a fine light falls upon the work. As she smooths, folded flat work can be laid neatly upon the wash bench, and starched pieces can be hung upon the towel rack and the temporary line arranged across the corner. The clothes basket of sprinkled pieces sits upon the kitchen chair, to save stooping to the floor.

Good-Health Talks

Suggested by Questions from Our Readers

By DAVID E. SPAHR, M. D.

Imperfect Hearing

Am in good health but very deaf. What can I do to regain my hearing?

W. H. P., Ohio.

Answer: It is quite possible to possess good general health and still have defects in hearing. The value of the special senses to the whole body cannot be measured in dollars and cents, and hearing is second in importance only to sight.

Perhaps the most frequent cause of deafness is due to an extension of inflammation from neighboring parts, especially the nose, throat, and mouth through the Eustachian tubes.

Care of the mouth should include care of the teeth, proper treatment of the tonsils, removal of adenoids, and such other general care as will maintain the oral cavity in a healthy condition. The nose is an important avenue of infection, and must be properly guarded if the hearing be retained.

Catarrhal conditions of the nose and throat are in a large part due to a lack of humidity, or moisture, in the atmosphere of the building in which we live and sleep. Allow the fresh, outdoor air free access to the rooms and avoid to a large extent catarrhal conditions. Normally the mucous membrane of the throat secretes a mucous secretion which catches particles of dust. A dry atmosphere tends to dry up these secretions and the foreign matter not only gains access to the lungs but irritates and inflames these membranes so that a catarrhal condition exists. As to treatment, you had better consult a specialist.

Pain Over the Kidneys

My husband suffers with soreness and pain over the kidneys, which began about twenty years ago. He also has bleeding piles. What would you advise?

Mrs. E. A. M.

Answer: Because your husband suffers from soreness and pain over the kidneys does not convince us that he has kidney trouble. In fact, contrary to the wide-spread opinion of the laity, there are very few pains in the back from disease of the kidneys. Pain over the kidney is only elicited by deep pressure. This pain and tenderness is evidently superficial and may possibly be a reflex pain from internal hemorrhoids which culminated in bleeding piles. There is evidently an obstruction to the return flow of blood through the portal circulation to the heart. Your husband should receive the best medical attention.

To Treat Varicose Veins

What is the best treatment for varicose veins?

Mrs. E. A. M.

Answer: Strap them down tightly with short strips of surgeons' adhesive plaster, but do not let the strips encircle the leg completely.

Hot Flashes

Mrs. L. H. of Iowa writes: "I am forty-eight years of age and am passing through the climacteric. Am annoyed with 'hot flashes' day and night."

Answer: So many women suffer from these nervous phenomena during the

"change of life." Usually a dose of ten grains of soda bromide every four hours will relieve the trouble. But first see to it that your bowels are open, kidneys acting, and skin clean and moist. One drop of aconite every hour till relieved will cure many cases of these nervous fidgets.

Here are some frightful statistics, compiled by Dr. Emmett Holt, the New York specialist, in diseases of children. He has statistics of 10,000 cases of babies that have died during the first year of their life. Out of every 100 cases that have died, 33 occurred during the first month, 28 occurred in the first two weeks, 22 occurred during the first week, and 13 occurred during the first day.

Certainly something should be done to better the condition and health of the mothers to lessen the serious mortality. Women must learn to take better care of themselves during gestation.

Eczema

B. F. Sargent of Vermont writes: "I have a very troublesome case of eczema. The inside of my hands are the worst; there it seems to eat in deep. It will heal in some places and break out worse in others."

Answer: Eczema is one of the most persistent and troublesome diseases. Its habit of intermitting, of healing up in one place and breaking out in another, appearing and disappearing, and its elusive simulation of a cure, only to recruit its forces and renew the attack with greater violence in a new region, makes the diagnosis very difficult.

In the first place, avoid all sources of irritation. Water and soap are to be very sparingly and only occasionally used, as they are often a source of irritation. Keep the hands dry and clean. Cover the small patches with flexible or benzoated collodion, to protect from air, water, or any external irritant. Keep the bowels clear, the secretions active, and partake of a moderate, unstimulating diet; and take some good tonic like quinine, 10 grains a day, or cod-liver oil.

Chalky Urine

What is the cause of a chalky appearance in urine after it has dried?

Mrs. E. A. M.

Answer: Chalky appearance of the urine is due to earthy phosphate, which represents the waste of tissue. It indicates the person is losing flesh and strength.

J. McDermott of Texas makes a valuable suggestion in the following letter. His idea is a good one, simple and effective. Here is his letter:

"I read in FARM AND FIRESIDE an article entitled 'Good-Health Talks.' Under that head I read of 'Poisoning by Mistake.' A good many instances of poisoning by mistake could be prevented if all bottles containing poison were wrapped with twine. When the bottle is touched in the dark, the twine will tell that it is poison."



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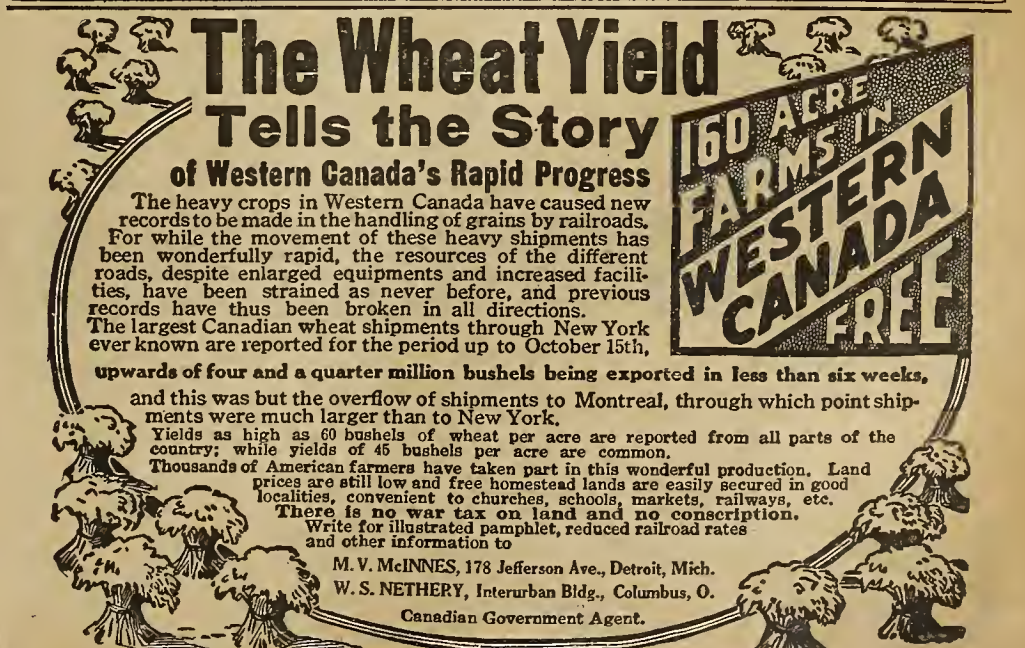
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The Baited Trap

A Story in Five Parts by Edwin Baird

Illustrated by ROBERT AMICK

PART ONE

II

BOB YATES had lived three weeks in Mrs. McNally's rooming house before he became acquainted with Frank Sherwood, who occupied the adjoining room. He and Sherwood met one autumn evening in the lower hall, and ascended the staircase together. The situation, even in Chicago, demanded some semblance of amenities. Comments were passed on the weather and upon the narrowness, steepness, and creakiness of the stairs; and when they reached the upper landing they exchanged cards and shook hands.

"I hear," said Sherwood, with his hand on his doorknob, "that you're from the country." He spoke with an interrogative inflection, but there was no impertinent curiosity in his pleasant brown eyes—only a friendly interest.

"Yup," said Bob, smiling. "I was born and raised on a farm." He liked this round-faced, stocky young man, and regretted he hadn't met him earlier.

Sherwood opened his door. The interest in his brown eyes had kindled. "Do come in," he urged cordially. "I'd like to talk with you. I'm mightily interested in farming."

The room they entered, though small, was as trim and tidy as its neatly dressed tenant, and as attractive as a rooming-house chamber ever can be. On a table near the window were stacked, in orderly array, divers books on farming, pamphlets and bulletins from the United States Department of Agriculture, and several volumes of an agricultural periodical. Near-by was a card-index cabinet. The calcimined walls were undecorated with pictures, but on the bureau there were two large-sized photographs of an exceedingly pretty girl—dark-eyed, black-haired, her face expressive of fresh innocence and purity.

Sherwood rolled a chair forward for his guest, seated himself on the edge of the bed, and indicated a jar of cigars.

"Help yourself," he invited.

Bob lighted a cigar, his eyes roaming about the neat, clean room. They came to rest on the girl's photograph. When he sat down he was still gazing at it. Then he heard Sherwood ask:

"How long have you lived in Chicago, Mr. Yates?"

"Less than a month," said Bob, facing his host.

"Mrs. McNally tells me you're a street-car conductor."

Bob nodded; then, under pretense of tapping his cigar against the ash tray on the bureau, he turned and again looked at the two photographs propped against the mirror.

"Do you like Chicago better than the farm?"

"Well—yes," said Bob absently. "I sort of got tired of farm life. D'ye know, there's something familiar about this girl's face, and yet I can't remember exactly where I've seen it before." He turned back to Sherwood, his yellow brows knitted with perplexity.

Sherwood smiled.

"You no doubt saw it in a magazine. Her picture is reproduced in scores of magazines."

"She's not an actress?" Bob, honest to the core, had an old-fashioned prejudice against "girls who went on the stage."

"No; she's a model—commercial photography. Her picture appears only among the ads."

Bob thwacked his knee with his open palm, and looked again at the photographs.

"Now I remember!" he exclaimed. "I saw her holding a cake of soap on the back cover of a magazine. And I never have forgotten her!" He added to himself, "And no wonder!"

Sherwood offered no comment.

Bob continued to gaze at the photograph nearest him. His cigar, unheeded, went out. He leaned forward intently, arms resting on the bureau, mind absorbed in the picture. There was something in the girl's dark eyes—a glowing light—that called to him irresistibly; something that struck deeper than mere physical appeal; something spiritual, divine. He could not name it, nor could he analyze his emotion: he only knew that if there existed a girl he might love through eternity this was she.

He was called suddenly back from the clouds by the sound of Sherwood, clearing his throat preparatory to speaking, and he straightened up in his chair, apologetically, and turned his back to the bureau and his face toward the bed,

where sat Sherwood. A slight flush effaced the freckles on his high cheekbones. He fumbled for a match and lighted his dead cigar with fingers that were not entirely steady. He felt the guilty fear of a boy who has been caught stealing green apples.

Sherwood, though, had the decency to ignore his confusion.

"I'd like to show you what I've been doing in a farming way." And the chub-faced young man rose smilingly and walked to the card-index cabinet. Bob followed.

The cabinet proved to be a treasure-trove of agricultural lore, arranged systematically under categorical heads, and its proud owner pulled out the drawers and ran a caressing hand over the alphabetically marked cards, explaining his work with quickening enthusiasm.

"I haven't overlooked anything," he said. "It's all here—all the knowledge that is required to run a modern farm in a businesslike, up-to-date way. The beauty of it is, you can find the answer to any farm problem in a minute's time." By way of demonstrating the efficacy of his system, he asked himself a few questions and instantly plucked forth the answers, neatly typed on thin cards. "I did all this myself," he ended, pointing to a typewriter beneath the bed.

"Where'd you get all your information?" asked Bob.

"From books and farm papers. Almost all of our knowledge comes from reading."

"And do you think you can run a farm

He rested his arms on the bureau. There was something in the girl's dark eyes—a glowing light—that called to him



that way?" Bob was plainly incredulous.

"Most assuredly. A farm, if it is to be run profitably, must be managed as carefully as any other business."

Bob smiled in gentle dissent, shaking his head.

"I never heard of runnin' a farm that way," he said, nodding at the oak cabinet.

Sherwood was undismayed.

"No doubt it does seem theoretical to you—here in a city rooming house. But it won't on a farm."

"You own a farm?" asked Bob.

"Not—just yet." Sherwood hesitated, thoughtfully; then, with the impulsiveness which often prompts lonely men in big cities to divulge their intimate affairs to strangers, he said: "But I shall pretty soon. I'm negotiating now for a place. Advertised in the farm journals and got about a thousand answers—wait, I'll show you." He crossed to a steamer trunk, threw up the lid, and took out a bundle of photographs of assorted shapes and sizes. "Pictures of some of the places," he explained. "Oh, here's another picture of Dolores!" He stooped and picked up the photograph, then handed it to Bob.

It was a fresh view of her, taken in a low-necked dress, and she was more charming, more captivating, than in either of the other two pictures—or so Bob thought. She was gazing into the "eye" of the camera, and as Bob looked down into her softly glowing, dark eyes he felt his blood quicken. What a wonderful girl she was! . . . Dolores. The name suited her well.

Sherwood, standing at his elbow, was displaying the farm pictures and talking of them, but Bob neither saw nor heard. He had eyes and thoughts only for the picture he held in his hand. At the first opportunity he asked:

"What is her last name?"

"Sherwood," came the prompt answer. "Then she's—is she—" Bob stopped lamely, flushing with embarrassment. He wanted to say, "Is she your wife?"—but the words stuck in his throat.

"She's my sister," said Sherwood, looking closely at one of his pictures.

A great billow of relief surged gratefully over Bob. He longed to say something that would express his joy. He looked at Sherwood with shining eyes and said:

"Do you mind my saying, Mr. Sherwood, that your sister is the most beautiful girl I've ever seen?"

Sherwood glanced up from the picture he was studying. A smile edged his full lips.

"Not at all. Everybody who sees her says the same thing."

Bob became conscious of a sudden depression. Such a girl must have many admirers—many suitors.

"She's not engaged?" he asked quickly.

Sherwood nodded briefly.

"As a matter of fact, she is; and to a fellow I most heartily detest. Oscar Lawrie's his name, and he's a ne'er-do-well, if ever there was one."

Bob's first feeling was like unto that of a hungry dog who sees a beefsteak

AT TWILIGHT on the following day Bob cut through the Badger woodlot which adjoined his father's farm on the south, climbed a wooden fence, and tramped across a wheat field to an old-style red barn, where he found his father examining the teeth of a harrow in the fading light. There was no sign of any of the hired men, which was somewhat strange. On his way to the barn Bob paused at the several outbuildings for a hasty inspection, and he found plentiful evidence of bumper crops. In fact, everything, from silo to hayricks, exhaled the very spirit of prosperity. And it was this which brought a frown of worry to his face. A vague suspicion, conceived on the train en route to Wisconsin from Chicago, was now taking definite shape in his mind.

No telegram had presaged his homecoming, and yet his father, a spare, raw-boned man of fifty, with a brick-red face and shaggy eyebrows, evinced no surprise at sight of him. Neither did he show much gladness.

"Howdy, Bob," he said, extending a leathery hand. "Just get in?"

"I came straight here from the station," replied Bob. "Walked it. Where is everybody?"

The senior Yates, feigning an interest in the harrow, did not look at his son.

"All gone, Bob, 'cept your ma and me. I'm sellin' out."

Bob placed his valise on the floor and half seated himself on a plow handle.

"So I understand," he said quietly.

"A Mr. Sherwood of Peoria told me."

Even this did not startle the old man. He looked up slowly, drawing the back of his bony hand across his brow—a familiar gesture.

"I thought likely you'd know of it, seein' as you and him lived at the same place in Chicago. He's an orphan, and he's been in Chicago settlin' up his pa's estate. His sister's livin' with her aunt in Peory. But I guess he told you about that?"

Bob nodded silently.

"Well, he's the feller I been dickerin' with. He's gonna swap me his home in Peory for the farm."

"How much to boot is he offering?"

"A—ah—substantial sum," hesitated Mr. Yates, patently ill at ease.

"How much?" insisted Bob.

"Well—three thousand was the figger we agreed on, I guess."

Bob was silent for a little while, looking thoughtfully at his father, who had taken some harness from a hook on the wall and was inspecting it in his slow, methodical way. Finally the young man asked in a low voice:

"What do you want to sell out for, Dad?"

"I'm tired o' farm life and I'm gettin' on in years. I cal'ate I'll be better off livin' in town." As Yates spoke he replaced the harness on the hook, his back toward Bob.

Bob looked at him sorrowfully and bit his lip. He saw his father was side-stepping the issue, and he had already divined the reason. Later, after supper that night, his surmise was made a certainty. While his father was outside, locking up the chickens and doing other chores, his mother who, throughout the evening meal, had betrayed a distressing anxiety that almost overshadowed her joy at seeing Bob home again unexpectedly, drew close to him in the living-room and, whispering most of her words, told him what had happened in the last two weeks.

The farm that year, as Bob well knew, had declared no dividends. There had been a deficit, indeed. Never before had the crops been so poor. Everybody said it was the soil, which had grown sterile and worthless. It would never be productive or profitable again—so they all said. Well, Dad had believed them, and two weeks ago, when he saw the advertisement of this Mr. Sherwood, he had done a desperate, sinful thing. First, he had discharged all the hands, that they might not witness his dishonest methods; then he had bought great quantities of corn, wheat, oats, hay, potatoes, and other produce, and had stored them on the farm so that it would appear they had been raised there. Then he had written to Mr. Sherwood, asking him to call and, enclosing photographs of the fictitious crops—"the biggest in Polk County, bar none."

"I was aimin' to write you about this."

EW

Bob," ended Mrs. Yates, plucking nervously at a raveling on the arm of her stuffed chair, "but I'm glad now I didn't. I talk lots better than I write. I always—"

"We've got to stop him," interposed Bob, who could think of nothing except his father's trickery. "Why, Mother," lowering his voice to a tense whisper, "it amounts to—plain stealing!"

Mrs. Yates clasped his hand between both her own, leaning appealingly toward him. He saw she was verging on tears, if not a hysterical break-down. She was an extremely religious woman, and it was from her that Bob inherited his steel-ribbed honesty.

"I've talked with him, Bob," she despaired, "till I'm hoarse, and I can't move him. He's set on doin' this thing and won't listen to me. You try to bring him to his senses, Son."

Bob murmured something in acquiescence and patted her hand reassuringly. A minute later his father entered the room.

III

WITH a final imploring look at Bob, Mrs. Yates rose and went out to the kitchen to finish washing the supper dishes. When, after some forty minutes, she returned to the living-room and paused on the threshold, she found her husband and son in a heated altercation, which was none the less violent because neither raised his voice or gesticulated freely. They were men who rarely became emotional, though each was capable of being stirred deeply. And both were stirred now to their most profound depths.

Bob, standing before his father, who was seated beside the fireplace, was saying, with a forced restraint that made his voice tremble: "Then if you won't consider us, think of yourself—"

"Now, Bob, there ain't no use in your talkin' thataway. It don't do no good, not a bit. I'm gonna see this thing through—"

"And disgrace us all!" exclaimed Bob bitterly. "Mother and me, as well as yourself. You should at least think of Mother."

The old man spat reflectively into the crackling wood fire, and sat for a silent space gnawing at a corner of his ragged mustache. Then, still gazing at the fire: "Business is business," he said doggedly, "just like they say. I guess, Bob, you never heard o' that old Latin proverb which says, 'Caveat emptor.' It means the buyer better look out or he'll get stung. Well," stretching his legs enjoyably toward the blaze, "that's what our friend, Sherwood—"

"There's something else," interrupted Bob with more impatience than he had yet shown, "that I haven't told you or Mother: Mr. Sherwood's sister, Dolores, is—well, I'm sort of in love with her."

Bob could almost feel the electric tension that leapt through the air. His mother sprang up, speaking for the first time since entering the room: "Oh, Bob—Bob!" His father also rose to his feet, and looked at him queerly.

"Why didn't you tell me this afore?" he demanded in a changed voice. "I didn't even know you was acquainted with the gal."

Bob felt the hot blood pulse into his face. He could not, for the life of him, confess that he had never even seen the girl. His mother might understand, but his father—never! He lowered his eyes, reddening like a schoolboy in the throes of puppy love.

"I—I've known her," he stammered, "for quite a long spell—in a way. But not intimate. Her brother—I was just beginnin' to hope—"

"Well, anyways," put in his father with a sharp rasp in his voice, "it disrupts ever'thing!" He slumped back into his chair and crossed his knees savagely, hands thrust into his trousers pockets, his head lowered as he glared at the fire from beneath his heavy brows. The ruddy glow illuminated a deep scowl on his weather-beaten face.

Bob, what of his self-consciousness, did not perceive the significance of this until he felt his mother's fingers tighten excitedly on his arm and turned to see her eyes sparkle with sudden delight. Then he realized what he had done. For a moment the impulse was strong within him not to disillusion his father, to let matters take their course. And then the inborn honesty, which ruled his life, took possession of him. He drew his mother within the circle of his arm and held her closely, and his chin lifted somewhat as he said to his father:

"But there'll never be anything between us, Dad: she's engaged to marry another man."

IV

WHEN Bob entered the kitchen next morning, after a wakeful night, his mother was frying pork sausage and buckwheat cakes, and the air was fragrant with the aroma of fresh coffee. On the table was a jug of maple syrup. It was a frosty morning, with a tang of early winter outdoors—just the morning for such a breakfast. It had been a long

while since he had contemplated such a one, although he had known the "dairy lunch" imitations, and ordinarily he would have eaten with vast relish; but this morning nothing could quicken his appetite.

He had thrashed sleeplessly in his bed throughout the night, fighting the hardest battle of his life, and now he was not sure whether he had won or lost. Of one thing, though, he was positive: he could not betray his father, no matter how dishonest his father might be.

Breakfast was a dismal meal, consumed in stony silence. The buckwheat cakes, browned deliciously, were as paper to Bob's palate, the all-pork sausage likewise tasteless; but his father, sitting opposite, ate with enormous gusto, apparently thinking of nothing except the steaming viands his wife placed before him. Bob was glad when the meal was over and he could escape to his room.

He had locked his valise and was drawing on his overcoat when his mother tapped on the door and entered. She closed the door behind her and came close to him.

"Don't go back to-day, Bob!" "I'll lose my job if I don't," he said, buttoning his overcoat. "I only got two days' leave."

She laid her hands on his shoulders, lifting her eyes beseechingly to his.

"Don't you think, Bob, you—might—persuade—"

"No, Mother." And he shook his head decisively. "You heard what he said last night. We argued till nigh eleven o'clock, and he outtalked me. He even made me b'lieve, almost, he was doin' right. But now, when I think o' that poor young feller back in Chicago, with his little cards and typewritin' machine, and his books and papers, and all—well, it makes me plumb sick, clean through!" With a vigorous movement he stooped and picked up his grip; then he dropped it back to the floor and embraced his mother, kissing her affectionately on both cheeks.

She followed him to the door, and there she detained him, somewhat timorously, with a hand on his coat sleeve.

"Talk to him again, Bob," she begged.

"You'll have time on the way to the depot."

He saw that her eyes, uplifted, were bright with moisture, and the muscles of his throat suddenly contracted. A swift, hot anger against his father tugged furiously within him. She looked so forlorn, so piteous! And his father was to blame!

"Sure I will, Mother!" He spoke with rough heartiness, ashamed to betray the emotion he felt. After a thoughtful moment he added: "Maybe I can scare him into behavin' himself."

She looked up quickly, winking her eyes.

"What're you aimin' to do, Bob?"

"Never you mind," he said mysteriously, patting her shoulder. "I won't do anything that'll give you a moment's sorrow." With sudden impulsiveness, he bent and kissed her on the lips; then he picked up his valise and started for the front door.

She went with him as far as the porch steps for a last word of parting and, shading her eyes against the morning sun, watched him as he swung toward the road, where his father awaited him in the phaeton. [TO BE CONTINUED]

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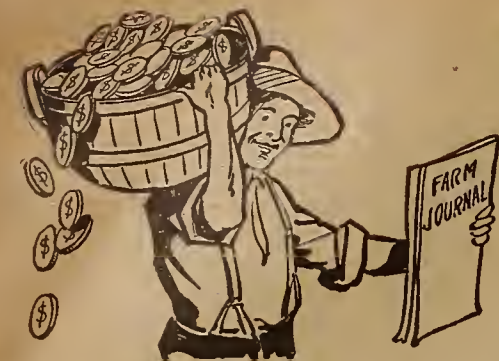
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I hain't no hand at tellin' tales, but I'll do my best

I HAIN'T no hand at tellin' tales, Er spinnin' yarns, as the sailors say; Someway o' 'nother, language fails To slide fer me in the oily way That lawyers has; and I wisht it would, Fer I've got somepin' that I call good; But bein' only a country squire, I've learned to listen and admire, Ruther preferrin' to be addressed Than talk myse'f—but I'll do my best:

Old Jeff Thompson—well, I'll say, Was the clostest man I ever saw!— Rich as cream, but the poorest pay, And the meanest man to work fer—La! I've knowed that man to work one "hand"— Fer little er nothin', you understand— From four o'clock in the morning light Tel eight and nine o'clock at night. And then find fault with his appetite!

He'd drive all over the neighborhood To miss the place where a tollgate stood, And slip in town by some old road That no two men in the county knowed, With a jag o' wood and a sack o' wheat That wouldn't burn and you couldn't eat! And the trades he'd make, 'll I jest declare, Was enough to make a preacher swear! And then he'd hitch, and hang about Tel the lights in the tollgate was blowed out, And then the turnpike he'd turn in And sneak his way back home ag'in!

Some folks hint, and I make no doubt, That that's what wore his old wife out— Toilin' away from day to day And year to year, through heat and cold, Uncomplatin'—the same old way The martyrs died in the days of old; And a-clingin' too, as the martyrs done, To one fixed faith, and her only one,— Little Patience, the sweetest child That ever wept unrickonced, Er felt the pain and the ache and sting That only a mother's death can bring.

Patience Thompson!—I think that name Must a-come from a power above,



"My coffee's sweet"

A Hoosier Romance

or

Squire Hawkins' Story

Fer it seemed to fit her jest the same As a gaiter would, er a fine kid glove!

And to see that girl with all the care Of the household on her—I declare, It was *oudacious* the work she'd do, And the thousand plans that she'd put through;

And sing like a medder lark all day long, And drownd her cares in the joys o' song; And *laugh* sometimes tel the farmer's "hand," Away fur off in the fields, would stand A-listenin', with the plow half drawn, Tel the coxin' echoes called him on. And the furries seemed, in his dreamy eyes, Like footpaths a-leadin' to Paradise, As off through the hazy atmosphere The call fer dinner reached his ear.

Now *love's* as cunnin' a little thing As a hummin'-bird upon the wing, And as liable to poke his nose Jest where folks would least suppose,— And more'n likely build his nest Right in the heart you'd leave unguessed, And live and thrive at your expense,— At least, that's *my* experience.

And old Jeff Thompson often thought, In his se'fish way, that the quiet John Was a stiddy chap, as a farm hand ought To always be,—fer the airliest dawn Found John busy,—and "*easy*" too, Whenever his *wages* would fall due! To sum him up with a final touch, He *eat* so little and *worked* so much That old Jeff laughed to hisse'f and said, "*He makes me money and airns his bread!*"

But John, fer all of his quietude, Would sometimes drape a word er so That none but *Patience* understood, And none but her was *meant* to know!— Maybe at meal times John would say, As the sugar bowl come down his way, "Thanky, no; *my* coffee's sweet Enough fer *me!*" with sich conceit, *She'd* know at once, without no doubt, *He* mean't because *she* poured it out. And smile and blush, and all sich stuff, And ast ef it was *strong* enough. And git the answer, neat and trim, "*It couldn't be too 'strong' fer him!*" And so things went fer 'bout a year, Tel John, at last, found pluck to go And pour his tale in the old man's ear— And ef it had been *hot lead*, I know It couldn't a-raised a louder fuss, Ner a-riled the old man's temper wuss!

He jest *lit* in, and cussed and swore, And lunged and rared, and ripped and tore. And told John jest to leave his door, And not to darken it no more! But Patience cried, with eyes all wet, "Remember, John, and don't ferget, *Whatever* comes, I love you yet!" But the old man thought, in his se'fish way, "I'll see her married rich some day;

And *that*," thinks he, "is money fer *me*— And my will's *law*, as it ought to be!"

So when, in the course of a month er so, A *widower*, with a farm or two, Comes to Jeff's, w'y, the folks, you know, Had to *talk*—as the folks 'll do: It was the talk of the neighborhood— *Patience* and *John* and their affairs; And this old chap with a few gray hairs Had "cut John out," it was understood.

And some folks reckoned Patience, too, Knowed what *she* was a-goin' to do— It was *like* her—la! indeed!— All *she* loved was *dollars* and *cents*— *Like* old Jeff—and they saw no need Fer *John* to pine at her negligence!" But others said, in a *kinder* way, They missed the songs she used to sing; They missed the smiles that used to play Over her face, and the laughin' ring Of her glad voice—that *everything* Of her *old* se'f seemed dead and gone, And this was the ghost that they gazed on!

Tel finally it was noised about There was a *weddin'* soon to be Down at Jeff's; and the "cat was out!" Shore enough!—'ll the *Jee-mun-nee!* It *riled* me when John told me so,—



They ast, would I be on hands

Fer *I* was a friend o' John's, you know; And his trimblin' voice jest broke in two— As a feller's voice 'll sometimes do,— And I says, says I, "Ef I know my biz— And I think I know what *jestice* is; I've read *some* law—and I'd advise A man like you to wipe his eyes And square his jaws, and start ag'in. Fer *jestice* is a-goin' to win!"

So we talked on fer a' hour er more, And sunned ourselves in the open door, Tel a hoss and buggy down the road Come a-drivin' up, that I guess John *knowed*, Fer he winked and says, "I'll dessappear— *They'd* smell a mice ef they saw *me* here!" And he thumbed his nose at the old gray mare, And hid hisse'f in the house somewhere.

Well, the rig drove up, and I raised my head As old Jeff hollered to me and said

By James Whitcomb Riley

Illustrations by

John Wolcott Adams

That "him and his old friend there had come
To see ef the squire was at home."
... I told 'em "I was; and I aimed to be
At every chance of a weddin' fee!"
And then I laughed,—and they laughed
too,—
Fer that was the object they had in
view.
Would I be on hands at eight that night,
They ast; and 's I, "You're mighty right,
I'll be on hands!" And then I bus't
Out a-laughin' my very wu'st—
And so did they, as they wheeled away
And drove to'rds town in a cloud o' dust.
Then I shet the door, and me and John
Laughed and laughed, and jest laughed
on.



"Remember,
John, and
don't ferget"

But all o' the fun o' the tale hain't
done!—
Fer a drizzlin' rain had jest begun,
And a-havin' 'bout four mile' to ride,
I jest concluded I'd better light
Out fer Jeff's and save my hide,
Fer it was a-goin' to storm that night!
So we went down to the barn, and John
Saddled my beast, and I got on;
And he told me somepin' to not ferget,
And when I left he was laughin' yet.

And, 'proachin' on to my journey's end,
The great draps o' rain come down,
And the thunder growled in a way to
lend
An awful look to the lowerin' frown
The dull sky wore; and the lightnin'
glanced
Tel my old mare jest more'n pranced,
As the big black lips of the clouds 'ud
drap
Out some oath of a thunder-clap,
And threaten on in an undertone
That chilled a feller clean to the bone!

But I struck shelter soon enough
To save myse'f. And the house was
jammed
With the women-folks, and the weddin'
stuff:
A great, long table, fairly crammed
With big pound-cakes, and chops and
steaks,—
And roasts and stews, and stumick-aches
Of every fashion, form, and size,
From twisters up to punkin pies!
And candies, oranges, and figs,
And reezins,—all the "whilligigs"

And "jim-cracks" that the law allows
On sich occasions!—Bobs and bows
Of gigglin' girls, with corkscrew curls,
And fancy ribbons, reds and blues,
And "beau-ketchers" and "curligues"
To beat the world! And seven o'clock
Brought old Jeff;—and brought—the
groom,
With a sideboard collar on, and stock
That choked him so, he hadn't room
To swaller in, er even sneeze,
Er clear his th'roat with any ease
Er comfort—and a good square cough
Would saw his Adam's apple off!

But as fer Patience—My! Oomh-oomh!—
I never saw her look so sweet!—
Her face was cream, and roses too;
And then them eyes o' heavenly blue
Jest made an angel all complete!
And when she split 'em up in smiles
And splintered 'em around the room,
And danced acrost and met the groom,
And laughed out loud—It kind o' spiles
My language when I come to that,
Fer as she laid away his hat,
Thinks I, "The papers hid inside
Of that said hat must make a bride
A happy one fer all her life,
Er else a wrecked and wretched wife!"

And someway, then, I thought of John—
Then looked to'rds Patience. . . . She
was gone!
The door stood open, and the rain
Was dashin' in; and sharp and plain
Above the storm we heerd a cry—
A ringin', laughin', loud "Good-by!"
That died away as fleet and fast
A hoss's hoofs went splashin' past!
And that was all. 'Twas done that
quick! . . .
You've heerd o' fellers "lookin' sick"?
I wisht you'd seen the groom jest then;
I wisht you'd seen them two old men,
With starin' eyes that fairly glared
At one another, and the scared
And empty faces of the crowd;
I wisht you could a-been allowed
To jest look on and see it all,
And heerd the girls and women bawl
And wring their hands; and heerd old
Jeff
A-cussin' as he swung hisse'f
Upon his hoss, who champed his bit
As though old Nick had holt of it;
And cheek by jowl the two old wrecks
Rode off as though they'd break their
necks.

And as we all stood starin' out
Into the night, I felt the brush
Of some one's hand, and turned about,
And heerd a voice that whispered,
"Hush!—
They're waitin' in the
kitchen, and
You're wanted. Do you
understand?"
Well, if my memory
serves me now,
I think I winked. Well,
anyhow,
I left the crowd a-
gawkin' there,
And jest slipped off
around to where
The back door opened,
and went in,
And turned and shet
the door ag'in,
And maybe, locked it—
couldn't swear,—
A woman's arms around
me makes
Me liable to make mis-
takes.
I read a marriage li-
cense nex',

And tied
the knot

But as I didn't have my specs
I jest inferred it was all right,
And tied the knot so mortal-tight
That Patience and my old friend John
Was safe enough from that time on!

Well, now, I might go on and tell
How all the joke at last leaked out,
And how the youngsters raised the yell
And rode the happy groom about
Upon their shoulders; how the bride
Was kissed a hundred times beside
The one I give her, tel she cried
And laughed untel she like to died!
I might go on and tell you all
About the supper, and the ball,—
You ought to see me twist my heel
Through jest one old Furginny reel.

We kep' the dancin' up tel four
O'clock, I reckon—maybe more.
We hardly heerd the thunders roar,
Er thought about the storm that blowed—
And them two fellers on the road!
Tel all at onc't we heerd the door
Bus't open and a voice that swore—
And old Jeff Thompson tuck the floor.
He shuck hisse'f and looked around
Like some old dog about half-drown'd—
His hat, I reckon, weighed ten pounds,
To say the least, and I'll say, shore,
His overcoat weighed fifty more—
The wettest man you ever saw,
To have so dry a son-in-law!

The old man turned his eyes on me.
"And have you married 'em?" says he.
I nodded "Yes." "Well, that'll do,"
He says, "and now we're th'ough with
you—
You jest clear out, and I decide
And promise to be satisfied!"
He hadn't nothin' more to say.
I saw, of course, how matters lay,
And left. But as I rode away
I heerd the roosters crow fer day.



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Dec. 18



And we did dance—every one of us

Joys That Were Real

Christmas in the Wilds of Washington

By A. V. R. MORRIS

"MERRY CHRISTMAS!" "Wow! Wow!"

Suddenly awakened by this duet, I found Phyllis and Collie standing beside my bed. The shabby brown fur ulster which is Phyllis' winter outdoor garb and the curly golden-brown coat which grows on Collie were lightly powdered with snow.

Phyllis drew up the blind of the big window that lights our twelve-foot square shack in the wilderness, and revealed the view which is our perennial wonder and pride—Mount Hood rising beyond the Columbia River, the Klickitat hills, and the forests fringing our homestead clearing.

"Twelve inches of snow on the level," she announced. "Fine for the winter health of our baby apple trees. Keeps them from freezing. I wonder if anyone has remembered to put apples in the Christmas boxes that we're going to get by to-day's mail stage?"

"Let us hope so," I replied. "Any sort of fresh fruit, however, would taste good to-day."

"We'll start for the Letter Box Grove directly after breakfast, so as to get there as soon as the carrier does. He probably left the village earlier than usual, knowing how anxiously we'll all be waiting for our Christmas packages." Phyllis' voice held a wistful note as she added: "You do think he left early, don't you?"

"Of course he did," I heartily agreed, although secretly I conceived that the mail would arrive hours after its scheduled time because it always had done so on holidays.

Phyllis squeezed both the fore paws that Collie had laid on her lap. "Bones galore for you to-day, my beauty! This is going to be a merry Christmas for you as well as for us."

She reiterated that promise when we parted with Collie at the bar gate which separates our clearing from the forest trail leading almost straight to Letter Box Grove where the settlers for miles round about meet the tri-weekly mail man.

While still on the hilltop we were able to walk rapidly and comfortably, but as we descended the incline the snowdrifts became deeper and deeper, and we were soon plowing laboriously through four feet of snow. To take the roundabout way by the road was the only sane course to pursue, and we patiently retraced our steps to the mile-long strip of slashing known as a wagon right of way, which connects our homestead with a county turnpike. The snow covering that rarely traveled thoroughfare was freshly marred by four sets of small footprints.

"The Nielsen children," remarked Phyllis, "going to the letter boxes to collect the neighborhood news for their ill mother."

We were shortly exchanging the compliments of the season with them. As we trudged along together, they explained naively that while the mail man was not likely to bring anything to them it would be great fun to see whatever he might leave for some of the other children.

"Poor mites!" exclaimed Phyllis under her breath. Then said aloud: "Ask your papa to bring you over to see our Christmas tree this evening."

"Christmas tree!" I gasped. Phyllis' invitation to the Niens seemed as reckless and as certain to bring disappointment as her promise of bones to Collie.

But I speedily forgot my dismay at the prospect of entertaining a party in our tiny shack, for at Letter Box Grove we found twenty-five persons—men, women, and children—waiting impatiently for the mail carrier.

"Why, the stage should be here now and it isn't even in sight," said Phyllis. "But there's a band coming," announced one of the children. "Listen!"

Soon everybody present could hear a faint, rollicking tune that, gradually becoming clearer as the musician approached the grove, was recognized by the Niens.

"Diego's hand organ!" they exclaimed in chorus. "Now we'll dance!"

And we did dance. Every one of us. At first round and round the fire, but always widening the space about it as the pace was increased by the exhilarated spirits of the company. The brush fire died of neglect and the mail carrier was forgotten until he suddenly halted his stage coach between the lines formed for a Virginia reel.

Phyllis' confidence in her ability to supply Collie with "bones galore" that day was not misplaced. The huge box which the mail man had brought to us, and which Diego carried home on his broad shoulders, held all save the vegetable portion of a civilized Christmas dinner. Diego, having eaten his share of the feast, spent the afternoon in helping Phyllis to decorate a small hemlock growing in the center of our uncultivated garden plot. As fast as I could make little cheesecloth bags and fill them with candy and comfits, or tie red-cheeked apples in clusters, they attached them to the boughs of the tree. But, alas! our only lantern did not afford sufficient light to reveal its splendors to the Niens, and we were disconsolate until Diego conceived the idea of a brush-fire.

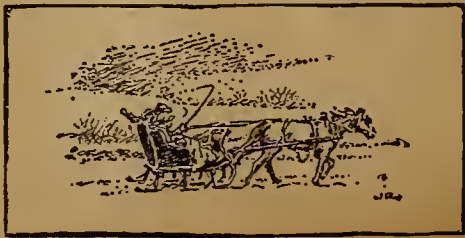
Collie, filled to repletion, was dozing inside the shack, and the rest of us were roasting marshmallows on forked sticks above the fire, when the bar gate swung back to admit an Indian pony ridden by a squaw.

"How," she said in response to our welcome, "you make fire all same like Indian."

And forthwith she squatted on a rug beside one of the children and was soon mastering the marshmallow-roasting art. It was Jenny, our aborigine neighbor on the opposite side of the cañon, and, noticing our outdoor fire, she had come to see what was the matter.

When our guests had said good night and departed—Nielsen and Diego each carrying a sleepy child, and Jenny hold-

ing one before her on the pony—Phyllis laughed triumphantly: "We've had a dance, a dinner party, and an evening reception. That's more gaiety than most city people enjoy within twelve hours."



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Good Things for Christmas

CHRISTMAS Roast
Goose—Having selected a young, plump bird, singe and clean at least twelve hours before it is to be cooked. When that time arrives, fill the cavity of the body with a stuffing made as follows: One cupful of mashed potatoes, one cupful of well-cooked rice, one cupful of bread crumbs. To the bread crumbs add one egg, well beaten, one small onion, grated, butter size of an egg, adding salt, pepper and sage according to taste. Mix all together and stuff bird, not too heavily.

Rub the outside of fowl over with butter, dust with flour, and roast as for turkey, not forgetting to baste with the gravy in the pan very often. When served, surround the roasted goose with a circle of small red apples which have been hollowed out into cups and filled with cranberry sauce. N. L., Kentucky.

Stuffed Sweet Potatoes—Bake a number of smooth, medium-sized sweet potatoes, remove from oven, and peel off the skin. From one side of the potato scoop out enough to leave a good-sized cavity. Mix this pulp with one cupful of nice pork sausage, form into balls, and place one in each potato. Brush the entire potato over with melted butter and sugar; replace in hot oven, and bake till the sausage filling seems done. Serve hot.

N. L., Kentucky.

Delicious Cranberry Pie—Make a rich pie crust and line a deep tin. On bottom of crust put one cupful of plump raisins; then pour over them one cupful of sweetened cooked cranberries, to which has been added a tablespoonful of cornstarch moistened with water. Put strips of pastry across top in lattice fashion, and bake in moderate oven until top is a delicate brown and sides of crust draw away from the tin. Serve cold.

N. L., Kentucky.

Pumpkin-Butter Custard—To one cupful of highly spiced rich-browned pumpkin pulp add two egg yolks, well beaten, two tablespoonfuls of rich milk or cream, and two tablespoonfuls of brown sugar. Pour into deep pie tin lined with rich crust, and bake in a moderate oven till the pie filling appears slightly browned and firm.

N. L., Kentucky.

Peanut Brittle—Melt two cupfuls of granulated sugar in an iron skillet over a slow fire, stirring constantly. On the instant the last lump is melted, take from the fire, add a cupful of chopped peanuts and a third teaspoonful of soda, stir quickly a few times, and pour out on a large buttered platter or tray. As soon as the edges are firm enough to take hold of, stretch the sheet as thin as possible and break up into pieces.

C. M. P., California.

English Toffee—For this simple but delicious pan candy, use one cupful of molasses, one cupful of brown sugar, one-

fourth cupful of butter, four tablespoonfuls of vinegar, and four tablespoonfuls of water. Cook without stirring until it hairs; flavor with vanilla, and pour into buttered pails. Any kind of nuts is good in this toffee.

R. L. F., Ohio.

Turkish Lumps—Make a syrup of three cupfuls of sugar and one-half cupful of boiling water. When syrup comes to a boil, add one package of gelatin soaked in one-half cupful of cold water, and let boil twenty minutes. A few minutes before taking from the fire add juice of one lemon and grated rind and juice of one orange. Strain into pans and set away for several hours to harden. When set, cut into squares and then roll in granulated sugar. Keep the knife dipped in granulated sugar to prevent sticking.

R. L. F., Ohio.

Hickory-Nut Meringues—To the whites of three eggs, beaten stiff, add one-half pound of powdered sugar and one-half pound of chopped nuts, slightly floured, and a few drops of flavoring. Bake in a slow oven on stiff paper, not buttered.

A. W. O., Pennsylvania.

Marshmallows—Cook two cupfuls of sugar with eight tablespoonfuls of boiling water to the thread stage; stir in two tablespoonfuls of gelatin soaked in six tablespoonfuls of cold water and the stiffly beaten white of one egg. This mixture must be beaten constantly until cold and stiff, then add one teaspoonful of vanilla, and pour into pans dusted with powdered sugar. Cut in squares, roll in powdered sugar, and put away in an airtight package unless wanted for immediate use.

R. L. F., Ohio.

Popcorn Balls will always be popular with children. Use one-half cupful of sugar and one-half cupful of water boiled five minutes and skimmed. This should be a thick syrup. When the corn is ready pour the mixture slowly over it and stir quickly till the corn is all coated. Lemon juice or vanilla will vary the flavor of the syrup. The corn can be formed into balls if a little butter is used to make the hands oily. Molasses taffy poured over popped corn and either made into balls of left loose is a delectable mess. For four quarts of popped corn use one-half cupful of molasses, with one-fourth cupful of sugar added. Boil without water until it is somewhat hardened when dropped into cold water. Just before using add one-eighth teaspoonful of baking soda.

I. M. A., New York.

Popcorn or Nut Crystals—Put into an iron kettle one tablespoonful of water and one teaspoonful of white sugar, boil until ready to candy, then throw in three quarts of corn nicely popped, and stir briskly till the candy is evenly distributed over the corn. Take the kettle from the fire and stir until cooled a little and each grain is crystallized and separate. Too hot a fire is to be avoided. Nuts of any kind prepared in same way are delicious.

C. P. C., Michigan.

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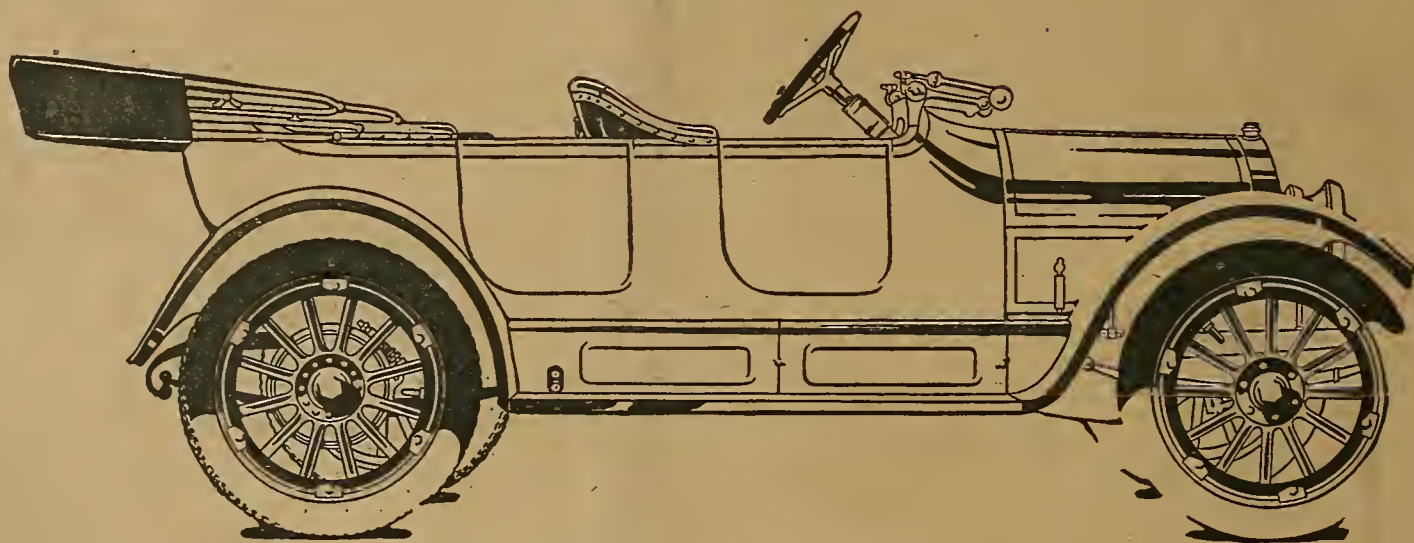
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